



Farm Combination Vehicle Pilot Program

Program Guidelines

Nova Scotia Department of Public Works

May 2, 2022

This document is subject to change. Please check the Nova Scotia Department of Public Works website for the latest updates.

www.gov.ns.ca/trans

Contents

Objective 4

Submission of Application..... 5

Definitions..... 7

Operating Routes / Operating Zones 8

Zone Approval:..... 8

Road Ownership:..... 9

General Conditions 10

Operational Conditions 10

Equipment Conditions 11

 Weights 11

 Dimensions..... 11

 Couplings..... 11

 Brakes..... 12

 Lighting / Signage 12

Weather conditions 13

Collision reporting procedures 14

Appendix A – Farm Combination Vehicle Pilot - Application Form 1

References i

Objective

The Department of Public Works (DPW) has recognized that there is a need in industry to tow two farm implements behind a farm tractor (in tandem formation) where certain criteria are met.

DPW is creating this pilot program to permit and evaluate the use of Farm tractors towing tandem farm implements on the public roadway.

Annual permits will be issued individually for specific, approved vehicle combinations. Applicants will be required to report collisions and near-misses and operate within the program limits. The program outcomes will be evaluated on a continuous basis by DPW staff and may be terminated at any time.

Submission of Application

The application may be submitted electronically in PDF format and can be emailed to SMP@novascotia.ca .

You can also apply for a Permit by fax, mail or in-person.

Fax: 902-424-4633 Attention: Special Move Permit

Mailing Address:

Business Registration Unit Att: Special Move Permits
Service Nova Scotia
P.O. Box 1523
Halifax, NS B3J 2Y3
Canada

Hours of Operation(except holidays)

Monday to Friday 8:30 am to 4:30 pm (Atlantic Standard Time)

Office Location(s):

6 North, Maritime Centre
1505 Barrington Street
Halifax, Nova Scotia, B3J 3K5

Toll-Free:(within North America) 1-800-898-7668

Telephone: 902-424-5536

Annual Permit

A permit is required for each approved vehicle combination. The annual permit fee for the Farm Combination Vehicle (FCV) Pilot Project can be found on the Service Nova Scotia and Internal Services website (In 2022, the prescribed fee for an annual non-conforming vehicle permit is \$133.25). The fee is to be made payable to the Nova Scotia Minister of Finance upon approval of the application.

Application Contents

All information listed in Appendix A must be provided in an application for participation in the Pilot Project. Missing, inaccurate or incomplete applications will not be approved.

Processing Time

FCV applications will be processed as received by DPW staff. Applicants should anticipate a delay of up to 15 business days for new FCV combination permits to be processed, and up to 5 business days for annual renewals. Factors that may extend the processing timeline include:

- Missing or incomplete information in application
- Seasonality (high volume of applications received in a short time frame)
- Scheduling conflicts for any required inspections

Accountability

Owners of Farm Equipment are fully accountable for ensuring the safety of the public and their operators when operating a FCV and will be held responsible for any damage caused by their vehicle on the operating route.

Definitions

For the purposes of this document, the following definitions are adopted from the *Motor Vehicle Act (MVA)*:

“farm tractor” means a motor vehicle designed and used primarily as a farm implement for drawing plows, mowing machines and other implements of husbandry and not so constructed as to carry a load other than a part of the weight of a vehicle and load drawn by it, and includes such a motor vehicle equipped front or rear with attachments designed and used for agricultural purposes, loaded or without a load; *MVA 2(p)*

“implement of husbandry” means a vehicle, with or without motive power, that is designed and used for agricultural purposes, and includes (i) farm machinery, (ii) a farm wagon, (iii) a trailer when towed by a farm tractor or when towed unloaded by any other motor vehicle to or from a farm equipment dealer or repair facility or to or from a field or farm, and (iv) a farm tractor; *MVA 2(ua)*

“trailer” means a vehicle without motive power designed to carry property or passengers wholly on its own structure and to be drawn by a motor vehicle and includes self-contained commercial units, such as compressors, generators, welders or other utility equipment or farm machinery, designed to be drawn by a motor vehicle; *MVA 2(bu)*

For the purposes of this document, the following definition has been developed:

“tandem farm implements” means a maximum of two implements of husbandry without motive power that may be connected in tandem by their manufacturer’s design and construction; where the separation and individual transport of those implements:

- Is not required to safely transport the implements between farm sites using the public roadway
- Is unreasonably burdensome to the operator and not in line with the original equipment manufacturer (OEM)’s intended use of the equipment and industry standard practices
- May result in damage to equipment

And where those implements are not hay wagons or cargo trailers

“Farm Combination Vehicle” (FCV) means a combination of vehicles comprised of a self-propelled Farm Tractor towing two tandem farm implements.

“Near-Miss” means an unplanned event that has the potential to cause, but does not actually result in human injury, environmental or equipment damage, or an interruption to normal operation but where, given a slight shift in time or position, damage or injury easily could have occurred.

Operating Routes / Operating Zones

There are two approval schemes proposed for FCV permits:

Single Route Approval:

Applications for single routes will be accepted for any route in Nova Scotia, excluding 100-series highways. Routes are to be proposed by the applicant. However, approval of these routes is subject to approval by Department staff. Proposed routes must:

- Be described including a defined start and end point
- Identify each turning movement and street name
- Have been surveyed by the applicant to confirm suitability for the intended purpose
- Have an estimated frequency of travel
- Not prohibit the operation of slow-moving vehicles

Route approval applicable only to the specific combination and business listed in the application.

Zone Approval:

Operators who need to operate on multiple routes surrounding their operation may request approval within a specified zone (for example, may travel up to 25km (radius) from their business address).

Within their operating zone the permit holder will remain subject to all restrictions and conditions in effect for FCVs.

Road Ownership:

Travel on municipal roads will be permitted only if approval is granted by both the applicable municipality and DPW.

Applicants can identify the provincially owned roads using the information on the Service Nova Scotia website:

<https://novascotia.ca/tran/trucking/roaddesignation.asp>



General Conditions

- Permits will be valid for one year from date of issue. (Note: Service Nova Scotia (SNSIS) or DPW may cancel a permit at any time for permit violations by the carrier or for safety reasons).
- The operating permit will be valid for the specific operation of an FCV unit configured as described in the approved application. One business owner may hold multiple annual permits for various equipment configurations and/or routes. Multiple towed equipment combinations may be listed on a single annual permit.
- The owner will be required to provide specific information, as listed in Appendix A, regarding each vehicle configuration at the time of permit application.
- DPW may apply operational conditions to the operating permit that are in line with those conditions of the Special Move Permit Program, or other conditions DPW staff deem necessary.
- The operator of an FCV must have in their possession a copy of the approved permit for their vehicle when stopped.
- FCV permits will only be approved for farmers, as identified under part I (5)(k) of the Nova Scotia Revenue Act Regulations.

Operational Conditions

- Maximum speed of an FCV combination will be 40 km/h or the maximum safe transport speed specified by the equipment manufacturer when fully laden, whichever is lower.
- The FCV configuration must not leave the specified route/zone.
- The FCV configuration must travel in the right lane only, Whenever possible.
- The vehicle is not permitted to travel between sunset and sunrise as reported by Environment Canada for the region of Nova Scotia they are driving in, unless they are displaying the required lights as dictated by the pilot program.
- An FCV must not follow within 500m of another FCV
- Operators must hold the appropriate license for their vehicle combination.
- FCV permits do not exempt operators from following any applicable regulatory requirements that are defined under the Motor Vehicle Act or its regulations.
- The operator is responsible to ensure that their equipment is being used in accordance with the manufacturer's guidelines. An approved FCV permit does not allow a tractor or implement to be used outside of its designed capacity.

Equipment Conditions

Weights

- Towed implement weights must never exceed a manufacturer's specified towing capacity of a farm tractor.
- The towing vehicle must meet the implement manufacturer's requirement for minimum tow vehicle mass.
- Axle Weights may not exceed maximums specified in the *NS Vehicle Weights and Dimensions Regulations*
- For FCVs where one (or both) of the towed implements are not equipped with brakes, the total combination loaded implement weight must not exceed 1.5 times the unladen Tractor weight (as specified by the OEM or validated via scale reading).
- For FCVs where both the towed implements are equipped with brakes, the combination loaded implement weight must not exceed 4.5 times the unladen Tractor weight.
- The FCV permit application must be made using the actual maximum weight of planned use of the towed implements. FCVs stopped over their permitted weight may be subject to fines.

Dimensions

- FCV combinations may not exceed 4.15m in height
- Implements must be reduced to their smallest possible width before entering the roadway.
- Additional operational conditions will be applied to permits in accordance with the Special Move Permits program conditions for vehicle combinations where:
 - Overall combination length exceeds 23.0M
 - Overall combination width exceeds 4.0M
 - It is deemed necessary by DPW staff in the interest of public safety

Couplings

- Trailer/Implement couplings must conform to the requirements of the *Trailer Couplings and Other Safety Devices Regulations*;
- Hitch pins must be secured with a retaining device.
- The first towed implement will be considered the "towing vehicle" of the second implement for the purposes of determining compliance with the regulations.
- Tractor drawbars and attachments must conform to the equipment manufacturers specifications and be the appropriate use as per ASABE/ANSI AD6489-3:2004 or the most current version of that standard, as it is amended from time to time. Manufacturer's rated PTO (or engine if not equipped with PTO) horsepower must match the drawbar rating in figure 1.

Tractor Drawbar Category	Maximum Tractor PTO Power Rating		Minimum Pin Diameter	
	hp	kW	in	mm
0	38	28	1	18
1	64	48	1 ¼	30
2	154	115	1 ¼	30
3	248	185	1 ½	38
4	402	300	2	50
5	671	500	2 ¾	70

Figure 1: ANSI AD6489-3:2004 Drawbar Categories

Brakes

- The service brake system of the Farm tractor must act on all the wheels of the towing vehicle. The operator must be able to activate all braking systems from the operating position while maintaining control of the steering device.
- Braking systems must be in good working order and maintained in accordance with equipment manufacturer's recommendations
- The combination must be equipped with a parking brake system suitable to hold the FCV stationary on a gradient in the absence of the operator and shall not depend on an exhaustible source of energy or continuous action by the operator.
- A fully laden FCV must have sufficient braking equipment to adhere to the minimum stopping distance performance measure prescribed by section 6 of the ANSI/ASABE S648-4 braking standard for towed vehicles and towed vehicle trains.

For greater clarity, stopping distance from 40km/h – 18.35m or 60 feet.

- Where equipped, hydraulic or pneumatic braking systems for towed vehicles shall be connected to the towing vehicle via a service brake control line and a supplemental line. Failure of either line shall not prevent full application of the combination service braking system.

Lighting / Signage

- The Tractor portion of the FCV must be equipped with daytime running lamps or lighted headlamps
- The rear-most implement in the FCV must display a slow-moving vehicle sign in compliance with MVA requirements.

- Amber marker lights(required for night time moves) or reflectors must be present at least every 6m on both sides of the vehicle. The type and placement of the lights/reflectors should conform to the Transport Canada requirements for trailer lighting and retroreflective devices.
- For operation outside of daytime hours, the rearmost towed implement must be equipped with two red tail lamps on rear- symmetrical-as far apart as practicable complying with NS Motor Vehicle Act standards.
- For FCVs wider than 2.6m, flashing lights or fluorescent flags must be placed on the sides and a flashing amber warning light visible from all sides of the vehicle must be placed on the top of the tow vehicle.
- FCVs wider than 4.3m must be led by approved pilot vehicle at the front of the combination. See the Nova Scotia Escort Vehicle Driver’s Handbook at the following link:
<https://novascotia.ca/sns/pdf/ans-drivers-smp-bulletin.pdf>

Weather conditions

The current road report for the Province should be noted, but final operational decisions should not be based entirely on that report. Operators must not proceed in weather conditions where the FCV will present undue risk to the public.

In general the FCV configurations should not operate when weather conditions include:

- a) freezing rain, sleet, hail, fog;
- b) heavy snowfall accumulations resulting over short time periods
- c) highway surface is snow or ice covered ;
- d) visibility is less than 500 m (due to blowing snow, rain, or other conditions);
- e) blizzard-like conditions exist;
- f) slippery road conditions exist;

Collision reporting procedures

NSDPW will use the information provided on Service Nova Scotia collision reporting form(or database) as completed by the appropriate police officer. However, to complete a full analysis of a FCV collision, additional data must be provided to NSDPW by the farm business within 48 hours of the incident via the Special Moves Permit group email (FCV@novascotia.ca) . This information will be subject to the same confidentiality agreements as the form completed by the police. The data to be provided include:

1. Description of FCV unit (Include approved permit number)
2. Name of operator
3. Date and Time of Collision
4. Description of Collision
5. Farm registration number
6. Description of vehicle trip (e.g. origin and time of trip start, route to destination)
7. Driver's description of weather along route and at collision site
8. Driver's experience driving Farm Vehicles

Appendix A – Farm Combination Vehicle Pilot - Application Form

Operation Details	
Owner's Representative (name):	
Master Number:	
Farm Registration Number:	
Contact Name (First, Last):	
Contact Number (Telephone):	
Contact Number (Fax):	
Email Address:	
Street Address:	
City:	
Postal Code:	
Province:	
Insurance Company:	
Policy Number :	

Farm Tractor (Tow Vehicle) Data	
Vehicle Make:	
Vehicle Model:	
Model Year:	
License Plate Number:	
VIN Number:	
Registered Weight(kg):	
Manufacturer's Rated Horsepower:	
Manufacturer's Gross Vehicle Weight Rating:	
Front Axle Weight (loaded, KG):	
Rear Axle Weight (loaded, KG):	
Maximum rated transport speed (km/h):	
Number of axles:	
Number of braked axles:	
Equipped with headlights? (Yes/No):	

Primary (First) Towed Implement Data	
Implement Make	
Implement Model	
Model Year	
Implement Type (Air seeder, etc.)	
Cargo carried (if applicable)	
Maximum loaded transport weight (kg)	
Maximum rated transport speed (km/h)	
Number of axles	
Number of braked axles	
Brake type	
Equipped with brake & signal lights? (Yes/No)	

Following (second) Towed Implement Data	Indicate N/A if same as first implement
Implement Make	
Implement Model	
Model Year	
Implement Type (Air seeder, etc.)	
Cargo carried (if applicable)	
Maximum transport weight (kg)	
Maximum rated transport speed (km/h)	
Number of axles	
Number of braked axles	
Brake type	
Equipped with brake & signal lights? (Yes/No)	
Single line or dual line brakes?	

Combination Data:	
Total Vehicle Train Height (m)	
Total Vehicle Train Length (m)	
Total Vehicle Train Width (m)	

Route Data (Single Route Approval)	
Starting Location	
Ending Location	
Description of Route (Attach to application, include each turn and road name)	
Municipal approval received (If travelling on municipally owned roads, yes/no)	
Frequency of travel (daily, weekly, monthly)	
Route surveyed by owner to verify no hazards that prevent FCV use (yes/no)	

Route Data (Operating Zone Approval Approval)	
Starting Location	
Description of Route (desired radius of travel, up to 25km)	
Municipal approval received (If travelling on municipally owned roads, yes/no)	
Frequency of travel (daily, weekly, monthly)	
Routes surveyed by owner to verify no hazards that prevent FCV use (yes/no)	

Applicant Signature
Signature:
Date:

Completed application forms can be submitted to SMP@novascotia.ca Please copy (cc) the address FCV@novascotia.ca at the same time.

References

PAMI. “Safe Implement Hitching .” *A Guide for Safe Hitching of Implements to Agricultural Tractors* , PAMI , 2011, pami.ca/pdfs/safety/sih_guide_Final.pdf.

NS-DPW. “Transportation Guidelines for Nova Scotia Farmers.” *Transportation Guidelines*, Nova Scotia Federation of Agriculture, 6 May 2015, nsfa-fane.ca/wp-content/uploads/2018/07/Transportation-Guidelines-NS-Farmers-REV_MAY6_2015.pdf.

Nova Scotia. “Motor Vehicle Act” *Nova Scotia Legislature*,
<https://nslegislature.ca/sites/default/files/legc/statutes/motor%20vehicle.pdf>

ANSI/ASABE S648 1-5, “Agricultural Field Equipment Braking”

ANSI/ASABE AD6489-3-2004 JUN2009, “Agricultural Vehicles — Mechanical connections between towed and towing vehicles”

Pennsylvania State University, “Connecting Implements to the Tractor” *National Safe Tractor and Machinery Operation Program* , 2013,
<https://www.postrock.kstate.edu/crops/TractorSafetyBookModule5.pdf>

