

# Puma 140 - 175

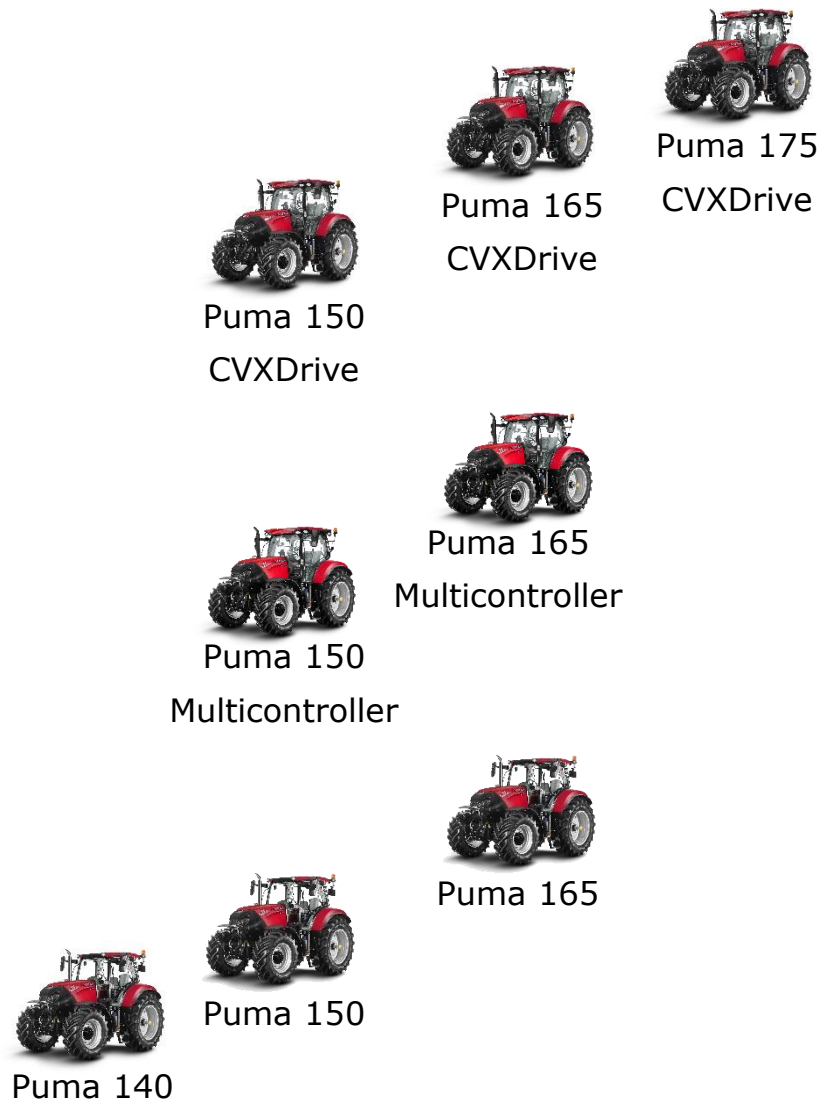
Case IH  
Puma  
Puma Multicontroller  
Puma CVXDrive

Language:  
English



**CASE IH**  
AGRICULTURE

# Line – Up // Content



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# For Whom Is It?

- The typical Puma customer is the mid-sized arable farm. It is preferred for tilling, soil preparation, seeding and applying inputs.
- Puma 140 - 165 X: delivering power to the ground. Cost efficient and economic.
- Puma Multicontroller delivers the same power to the ground but adds more comfort (multicontroller armrest) and productivity due to guidance system, HMC II and CCLS hydraulics.
- Puma CVXDrive adds absolute ease of driving and accurate speed control that only CVT can offer.
- Puma 140 – 175 are also great for contractors who appreciate the mix of power to the ground and semi-compact form factor.

Range Power Bandwidth	140 – 225 HP
Engine size Aftertreatment system	6,7 l/ 6 Cylinders SCR only, SCRoF, no CEGR
Typical weight – GVW	7.500 – 11.500
Wheelbase	2.734 / 2.790 mm
Total Height	3.026 mm
Largest tires rear	710/60R42
Maximum linkage capacity Rear / Front	8.257 kg /3.564 kg
Available oil for external applications	8 – 45 l.
Max no of remotes rear/front	5/2 with power beyond option
Transmissions	CVXDrive, Power Drive, ActiveDrive 6
SAE turning radius	5,88 m.

# Unique Selling Proposition

- All Puma 140 – 175 are designed primarily for field operations
- Puma CVXDrive: Maxxum CVXDrive on steroids. Larger, featuring a 6 cylinder 6,7-liter engine, it offers up to 225 HP and 940 Nm max torque.
- Puma Multicontroller: efficient powershift transmission delivering excellent power to the ground. Comfortable and silent, it offers premium features for mid-sized tractors
- Puma Multicontroller and CVXDrive can address all applications due to features such as engine brake, adaptive steering control, bar rear axles and HMC II. Both can be fitted with industry-leading AccuGuide (guidance) and AccuTurn Pro (fully automated headland turn).
- Puma: at the basis of the specifications spectrum, it provides in a mid-sized format the flexibility and universal appeal of a machine with 6 cylinder engine, impressive boost and six step semi-powershift gearbox. Up to 200 HP in an essential version.



- MY 2021
  - The engine oil service interval is now **750 hours** or 18 months. At the same time the transmission oil change interval is extended to 1.500 hours.
  - With introduction of Stage V engine, Puma customers will be able to use HVO Hydro-Treated Vegetable Oil (also called renewable diesel or **2nd generation bio fuel**).
  - **For ActiveDrive or PowerDrive transmission:** new power boost for transport applications: Starting with 13th gear, maximum boosted power is possible at rated engine speed
  - AFS Pro700 Quick Jump Menu
  - Package approach – options that are sold mostly together are bundled as packages - easier to order and manage preferences
  - Re-designed rear wheel weights
  - New standards:
    - Suspended front axle. Non suspended available as option.
    - 3 Speed rear PTO
    - 100 mm rams for rear linkage.
  - Telematics offering - advanced telematics becomes widely available in a new design and integration in farming charts.
- MY 2022
  - The new Case IH family styled hood features powerful LED lights such as an elastic closing rope
  - Redesigned entrance with Magnum styled entry steps which improve the entry in the cab in a more ergonomically way.
  - Whole bunch of new design features in the cab which will bring a lot of benefits to operate the tractor in a more ergonomically and efficient way.
    - new wiper design comes along with a better performing wiper stalk and a better self canceling indicator.
    - Cooled storage Area Infront of the steering wheel.
    - New optional features in the cab for example a cell phone holder.
    - Puma 150-175 will be the first with the new premium leather steering wheel.
  - Upgrade of the CVX Transmission benefits the driving experience.
  - Updates in the rear linkage area.
    - More ergonomic position of electrical sockets.
    - Improved stability and fixing of the Top Link.
  - Case IH T-Range Front Loader
    - Front loader ready option now available directly from Factory.
  - Along with the new front loader comes a new advanced Joystick.
  - New LED indicators and beacons

# Puma Walkaround

- 6 Cylinder engine up to 225 HP
- Solid power and boost for PTO and transport operations.
- Impressive hydraulics: up to 160 l/min flow, mechanical remotes option, customizable hydraulic controls option
- Standard and heavy duty front axles. Optional front brakes and 100% lockable differential
- Great static and dynamic balance of weights.
- Adaptive steering control option
- CVXDrive transmission option. In-built APM and creeper. Active Hold Control.
- Front linkage management option. Front PTO option
- Value line component of the family. Straightforward power
- Advanced Trailer Brake. Safety in road applications
- HMC II, AccuTurn Pro, AccuGuide, ISOBUS class 3.
- Flange and bar rear axle options.
- Engine brake option. Less brake usage
- Right hand shuttle. Adjustable shuttle aggressiveness. Shuttle memory
- Whole range of different Joysticks to serve the best benefit for the customer.
- Maximo Evolution seat with Dual Motion. Up to 65% vibration compensation with preventing dampening



# Engine – Main Characteristics

- Reduced input (low sulphur fuel + adBlue) and generous output (torque & power)
- Impressively wide constant power band (1.500 – 2.200 rpm)
- Low maintenance and consumption
- Low noise in operation
- 750 hours change interval



- Engine oil volume 13,5 – 17,5 l.
- Engine cooling fluid volume 27 l.
- Engine maximum noise: 93 dB
- Reversible fan option
- Grid heater option (-5°C)
- Engine block heater option (-18°C)

Model	Puma 140	Puma 150	Puma 165	Puma 175
Make / Type	FPT NEF 67, EU Stage V compliant			
Rated engine speed (rpm)	2.200			
Rated Power (kW/hp)	103/140	110/150	121/165	132/180
Max. Power @ 1.800 engine rpm (kW/hp)	<b>114/155</b>	<b>121/165</b>	<b>132/180</b>	<b>147/200</b>
Max. Torque @ 1.500 rpm (Nm)	655	700	770	840
Torque Rise (%)				
Rated Boost Power (kW/hp)	118/160	129/175	140/190	151/205
Max. Boost Power @ 1.800 engine rpm (kW/hp)	129/175	140/190	154/210	165/225
Max. Boost Torque @ 1.500 rpm (Nm)	750	805	875	940
Torque Rise with Boost (%)				
Model	Puma 140	Puma 150	Puma 165	Puma 175
Number of cylinders	6			
Displacement (cm <sup>3</sup> )	6.728			
Turbo	Wastegate turbocharger			
Emission Level	EU Stage V			
Standard fan type, (Optional fan type)	Vistronic (Eco Fan)			
Fuel Tank Size (l)	260/330	260/330	260/330	330
AdBlue (l)	48	48	48	48

# Engine: After-treatment

## Stage V - HI-eSCR2

- Prevent creation of DP inside the engine by allowing the engine to run at optimized temperature
- No EGR!!! – efficient combustion process, less soot particles are generated to begin with
- For Life aftertreatment – no specific maintenance other than Active Catalyst Management

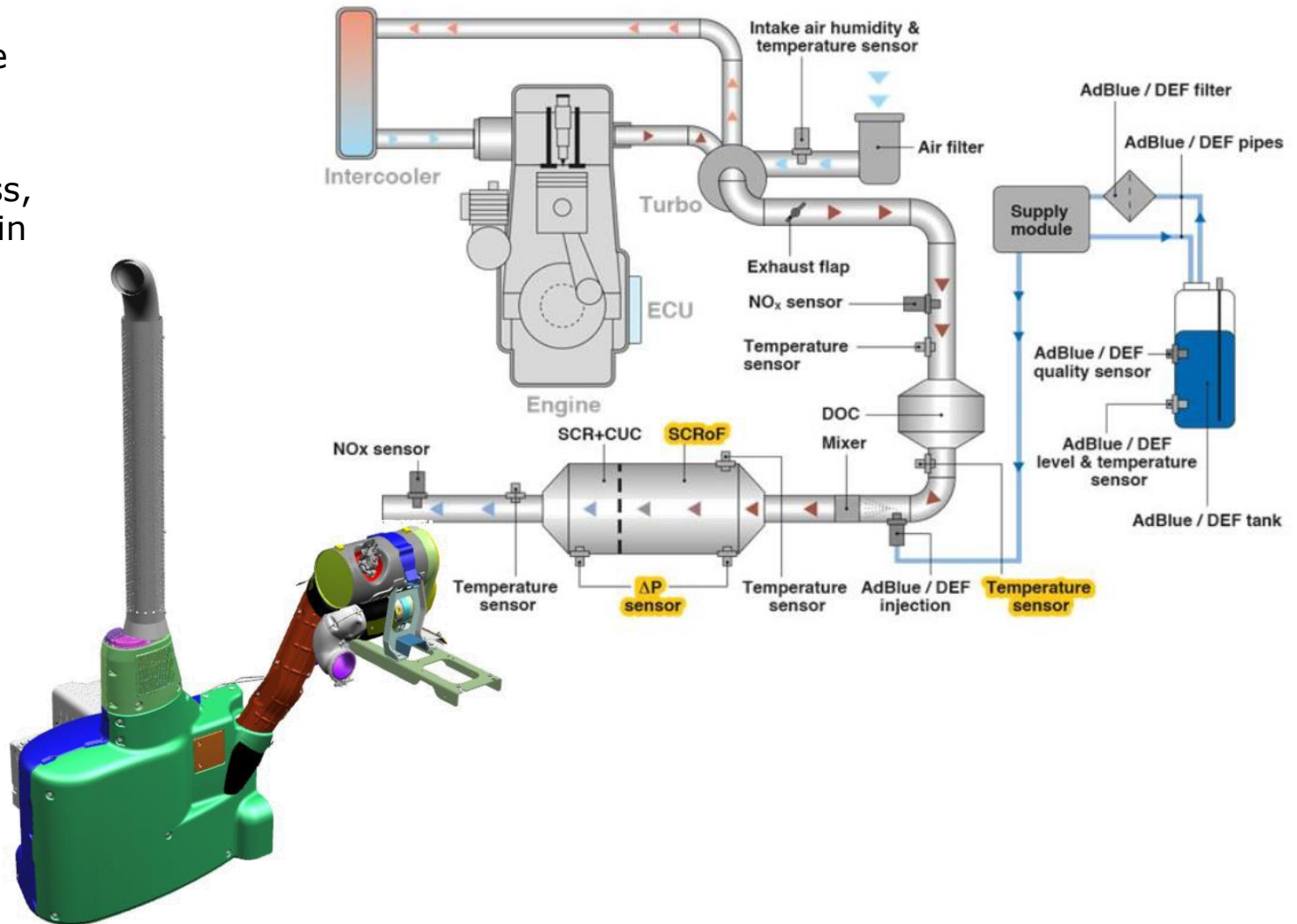
- No impact upon visibility – discrete

## AdBlue

- Usage of AdBlue 5 to 9% relative to Diesel consumption


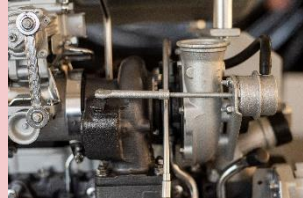
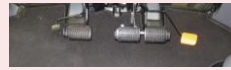
## Active Catalyst Management:

- Active removal of trapped particles
- Fully automatic
- Does not diminish engine output of power / torque

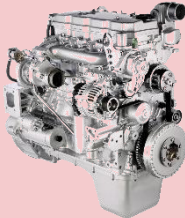
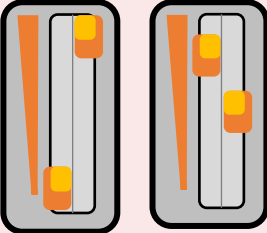
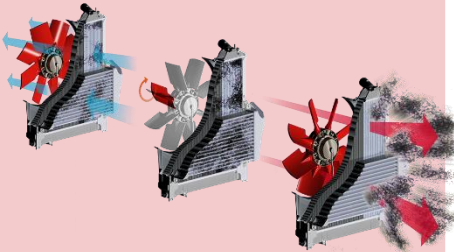




# Engine: Main Features and Benefits

Feature	Description	Customer Benefit	
Cross-flow design	Air ingress into the engine on the left side and exhaust on the right side.	Allows the intake air maintain low temperature and optimise combustion energy. Non-cross-flow desing engines have higher temperature of intake air, which reduces fuel efficiency or power output	
4 valve per cylinder	Each cylinder has two intake and two exhaust valves.	This allows better airflow than 2 valves configurations of similar capacity. Improves power output throughout the power band - especially at high engine speeds. Power output in transient regimes also improves as transition time is reduced	
Wastegate turbocharger	A wastegate is a valve that allows some of the exhaust flow to by-pass the turbocharger. This allows an efficient compression at all rpms while avoiding overspeeding and over-compression.	Modulate the power output with a manageable level of complexity. Wastegate turbochargers are simple to use and do not require servicing or replacement.	
Exhaust brake	Using an additional pedal located left of the clutch pedal, the driver can increase negative torque provided by engine cut-off. Thus the vehicle is slowed down without depressing service brakes.	Reduce significantly wear and tear of the service brakes. Cutting down the need to use service brakes at higher speeds - exactly where most of brake discs wear and tear happens.	

# Engine: Main Features and Benefits

Feature	Description	Customer Benefit	
Engine capacity	Engine capacity is a two-sided sword: the larger capacity engines tend to have more torque and more constant power, while less capacity allows the engine to consume less fuel	The 6,7 l engine reaches the sweet spot of optimum balance around 200 HP whereby not only it generates an excellent output, but it does so with a minimum fuel input.	
Split trottle	Two orange levers located on the armrest of CVX Drive tractors by Case IH. They allow intuitive capping the highest rpm of the engine and setting a minimal rpm as well.	Setting the engine speed bandwidth in a straightforward way without using cumbersome menus hidden within a screen. It is the simplest way to adjust engine operation parameters other than the acceleration pedal.	
Reversible Fan	A fan that can periodically reverse the air flow direction, upon manual or automated control	Reduces the amount of energy that the engine loses to keep itself cool. This can generate impressive savings in working in dusty environments or during work with implements that generate a lot of vegetal rests in the air (e.g. chopping)	

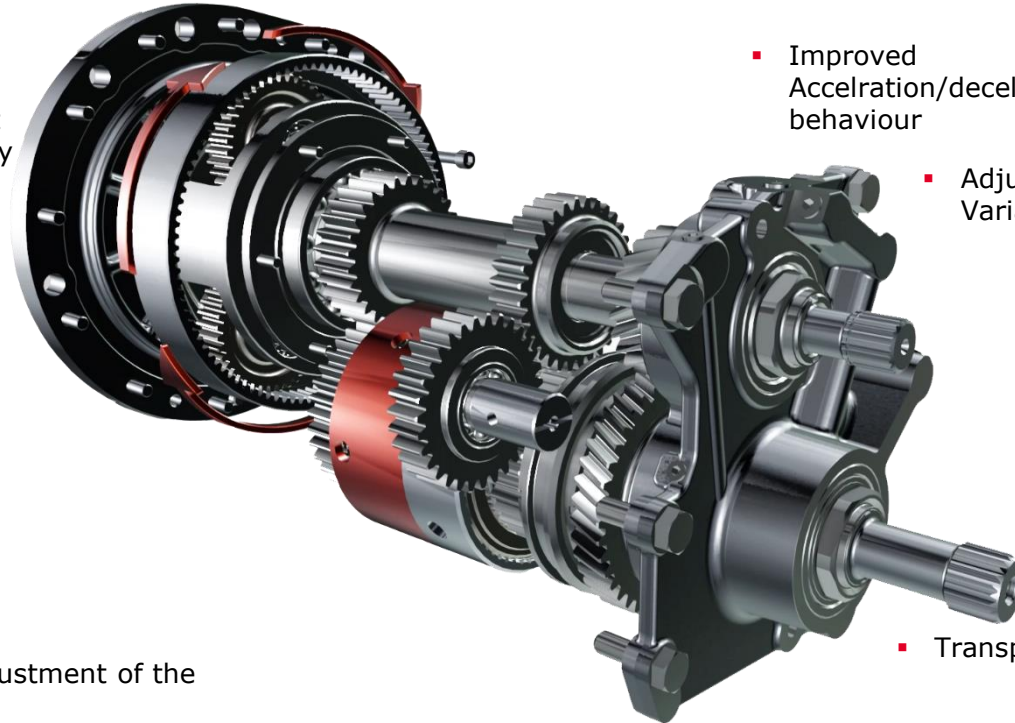
# Engine – Boost!

Application	Puma CVXDrive	Puma Multicontroller	Puma
PTO Applications	<p>Up to 30 HP additional power</p> <p>Conditions PTO fully engaged, speed forward above 0,5 km/h, PTO load above 112 Nm on the PTO driveline</p>	<p>Up to 30 HP additional power</p> <p>Conditions PPTO fully engaged, speed forward above 0,5 km/h, PTO load above 112 Nm on the PTO driveline</p>	<p>Up to 30 HP additional power</p> <p>Conditions PTO fully engaged, speed forward above 0,5 km/h, PTO load above 112 Nm on the PTO driveline</p>
Transport applications	<p>Starting with transmission operating in second mechanical range</p> <p>Coolant temperature below 105°C</p> <p>Transport boost is a flat curve offering the max boosted power beteen 2.200 rpm and 1.800 rpm.</p>	<p>Gear 13 or above (min speed 20 km/h).</p> <p>Coolant temperature below 105°C</p> <p>Transport boost is a flat curve offering the max boosted power between 2.200 rpm and 1.800 rpm.</p>	<p>Gear 13th or above</p> <p>Coolant temperature below 105°C</p> <p>Maximum boosted power available at 1.800 rpm</p>
External Hydraulic Applications	<p>Forward speed above 0,5 km/h</p> <p>Hydraulic load above 112 Nm</p> <p>Coolant temperature below 105°C</p>	<p>Forward speed above 0,5 km/h</p> <p>Coolant temperature below 105°C</p>	<p>Forward speed above 0,5 km/h</p> <p>Coolant temperature below 105°C</p>

- While some competitors offer 4 cylinder engines in this power range, Puma 140 – 175 offers true 6 cylinder power and torque reserves.
- The exhaust brake available on the Puma is still an exception. Most manufacturers do not offer it.
- Puma features a reversible fan. Still mostly an exception
- Torque available for heavy pulling exceeds typical engine performance in this class
- Zero exhaust gas recirculation – unlike John Deere 6M & 6R, Fendt 700
- Cross-flow design – unlike certain similar engines of competitors
- Between 7 and 10 litres of engine oil – frugal in every respect
- 21 l cooling liquid – SCR technology means the tractor does not need to run the engine at lower temperatures
- 140 or 170 Amp battery, 150 or 200 Amp electrical generator.
- Optional engine side rails available
- HSWO fuel compatible. Paraffinic renewable fuels are increasingly available to agricultural sector
- Transport boost is a flat curve offering the max boosted power between 2.200 rpm and 1.800 rpm.

# Puma CVXDrive Gearbox in a Nutshell

- 2 mechanical ranges forward. over 50% power transmitted mechanically
- In-built creeper. No extra cost for speeds down to 30m/h



- Double clutch package to shift mechanical ranges. Seamlessly
- One mechanical range in reverse. Up to 19 kmh.
- Use multicontroller lever or pedal to control ground speed. Simultaneously.
- 3 forward target speeds. 3 target speeds in reverse
- On-the-go adjustment of the target speeds
- EcoDrive. Heavy Traction.

- Improved Acceleration/deceleration behaviour

- Adjustable aggressiveness. Variable roll-out, Pedal Override

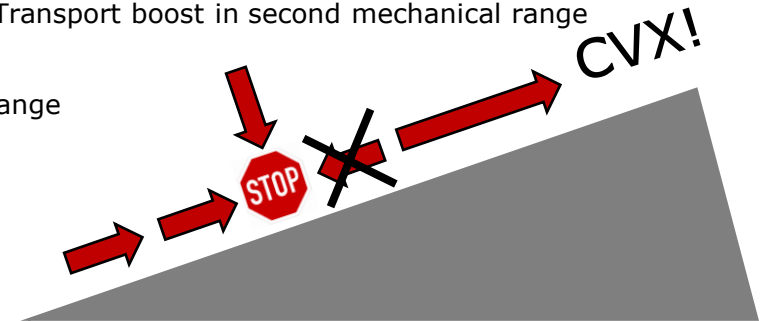
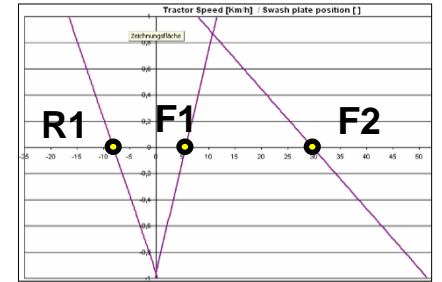
- Two speed points for fully mechanical power transfer

- Anti Jack-knife.

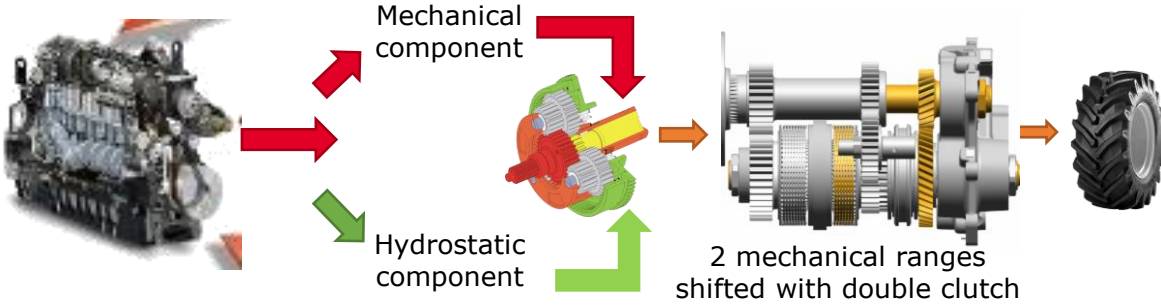
- Active Hold Control. Seamless drive – away

- Transport boost in second mechanical range

- True power shuttle. Safe change of direction



# CVXDrive Transmission

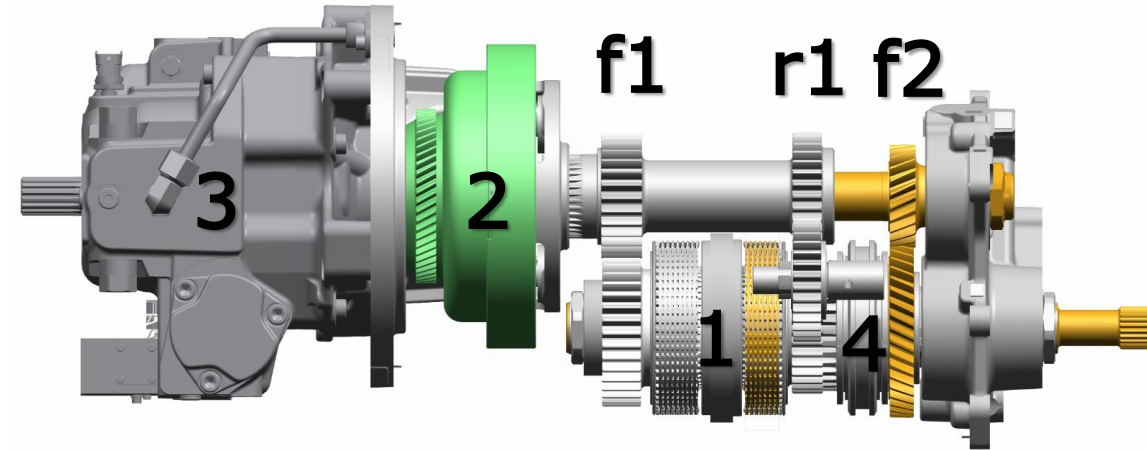


## Principle of CVT

- Power split
- Power re-composed in planetary system. Continuous ratio „translated“ to the wheels via 2 mechanical ranges

## Fundamental Advantages

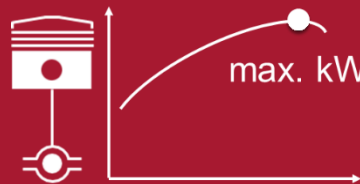
- any ground speed with the minimum possible engine speed or any ground speed with optimum engine speed
- Unparalleled driving comfort
- Superior efficiency under variable load



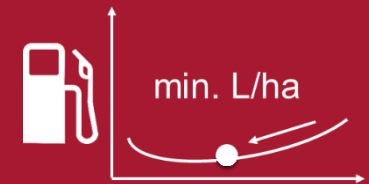
- (1) 2 mechanical forward and 1 reverse gear. Single wet double clutch for range and driving direction change.
- (2) Compound planetary gear combines engine and hydro-motor speed.
- (3) Hydro pump with 110cm<sup>3</sup> oil flow developed for most difficult conditions. Back - to - back mounting
- (4) Only one synchro-mesh pack for all shifting operations.



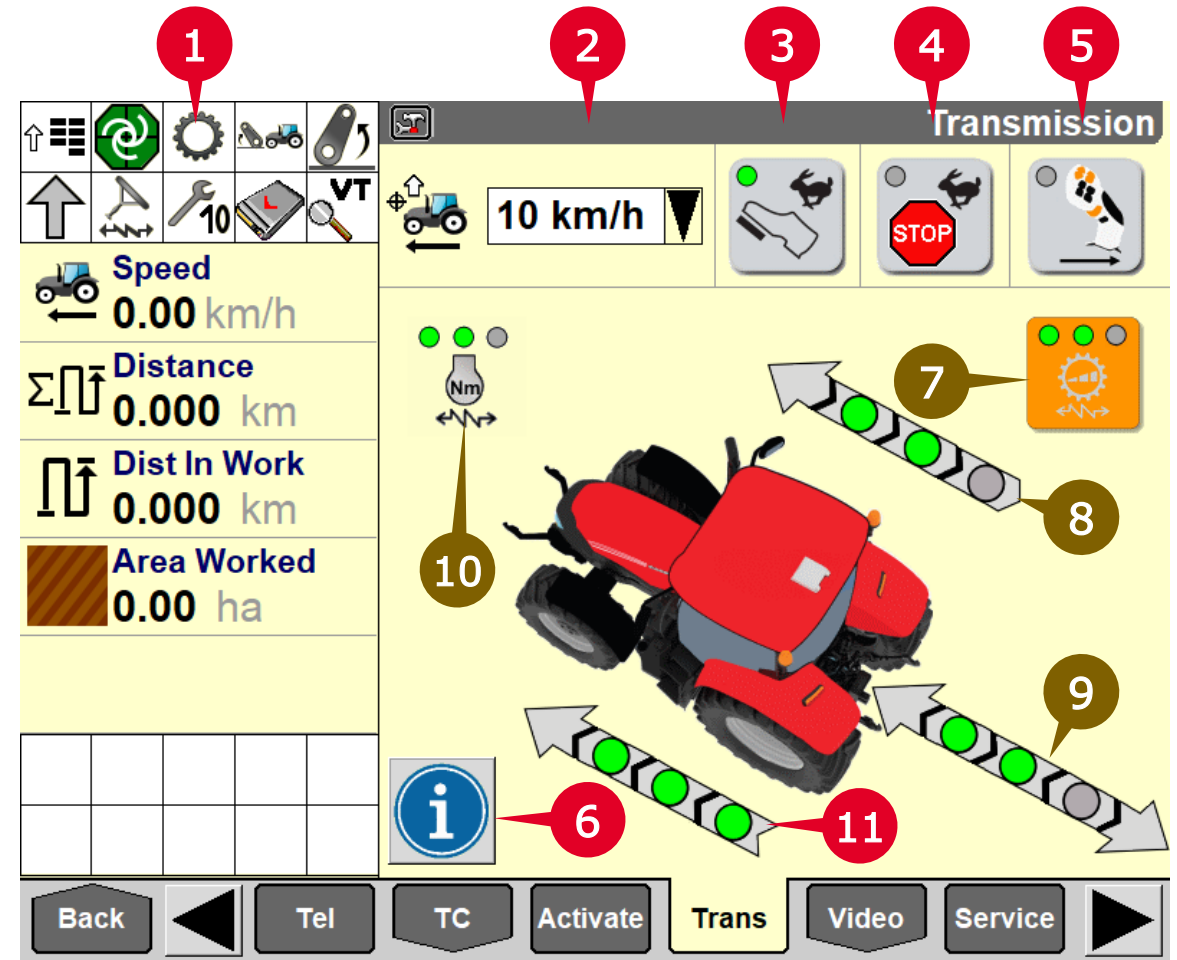
Maintain engine at optimum rpm for power and achieve maximum ground speed







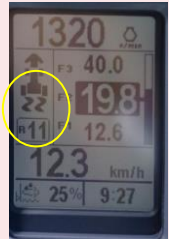


Maintain fixed ground speed and minimize engine rpm in order to save fuel



- Following APM settings are available via AFS Pro 700:
  1. Quick jump to transmission settings.
  2. Pedal override function.
    - > Adds selected speed to target speed.
  3. Kick down.
  4. Fast stop.
    - > Recommended for front loader or other applications where the tractor needs to stop as fast as possible.
  5. Fast deceleration.
    - > Tractor uses engine braking effect to decelerate fast.
  6. Information page.
- Following settings can be adjusted via orange button in the armrest or on the right-hand side of the display:
  7. Mode selector.
    - > Allows a similar setting for power shuttle sensitivity, deceleration rate and engine response characteristics.
  8. Deceleration rate.
    - > Long or short roll out.
  9. Power shuttle sensitivity
    - > Quick or smooth shuttle behaviour.
  10. Engine response characteristics (torque Nm).
    - > Used when higher load, as an example from a cultivator, is anticipated.
  11. Acceleration rate is set from the factory to maximum but can be individually controlled via foot pedal.



		Features	
<p>Multicontroller lever</p> <ul style="list-style-type: none"> <li>- controls the ground speed.</li> <li>- same impact as the acceleration pedal.</li> <li>- Achieved ground speed is always proportional to position of Multicontroller&amp; acceleration pedal.</li> <li>- shuttle functions, target speed adjustment as well as for rear linkage and CRPM/HMC</li> </ul>		<p>Active Hold Control Always the starting point. Essential to both comfort and safety. The tractor can stop on a slope and re-start driving without risking to stall the engine and without sliding downhill</p>	
<p>Digital Display.</p> <ul style="list-style-type: none"> <li>- In-built in A-pillar</li> <li>- Easy to see and glare – free.</li> <li>- Displays the three target speeds with the current one singled – out.</li> <li>- Shows selected direction, ground speed, engine rpm and relative position of the Multicontroller and time.</li> </ul>		<p>Adjustable aggressiveness. Transmission sensitivity impacts the braking as well as the reversing. With the highest sensitivity setting, the roll-out is shorter.</p>	
<p>Split throttle</p> <ul style="list-style-type: none"> <li>- Simplified control of minimum and maximum engine rpm.</li> <li>- Hand throttle (left) allows selecting the minimum rpm and right one the maximum.</li> </ul> <p>Driving strategies can be personalized</p>		<p>Eco Draft</p> <ul style="list-style-type: none"> <li>- Limiting gear operation to first mechanical range</li> <li>- avoid repeated upshifts and downshifts under variable conditions.</li> <li>- enable: select lower target speed and depresses simultaneously the shift switch on Multicontroller back and the tortoise switch. Gearbox stays in first mechanical range until restart.</li> </ul>	
<p>Acceleration pedal. Most CVX drivers prefer using the APM mode (Automatic Productivity Management). If APM is not active, acceleration pedal controls the rpm and the multicontroller lever controls the transmission ratio</p>		<p>Anti jack-knife: When forward button on the Multicontroller is pressed, the transmission ratio will be immediately frozen, regardless of when the brake is applied. Tractor – trailer combination remains stretched while applying the service brake. Activation of Anti-Jack Knife function is shown on A-pillar display.</p>	



# CVXDrive – One Transmission in Three Iterations

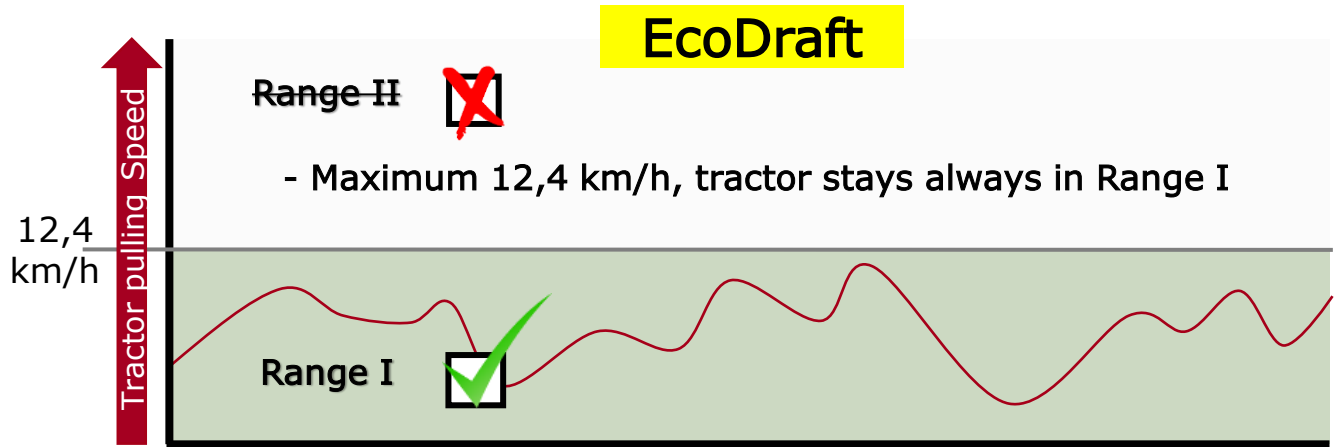
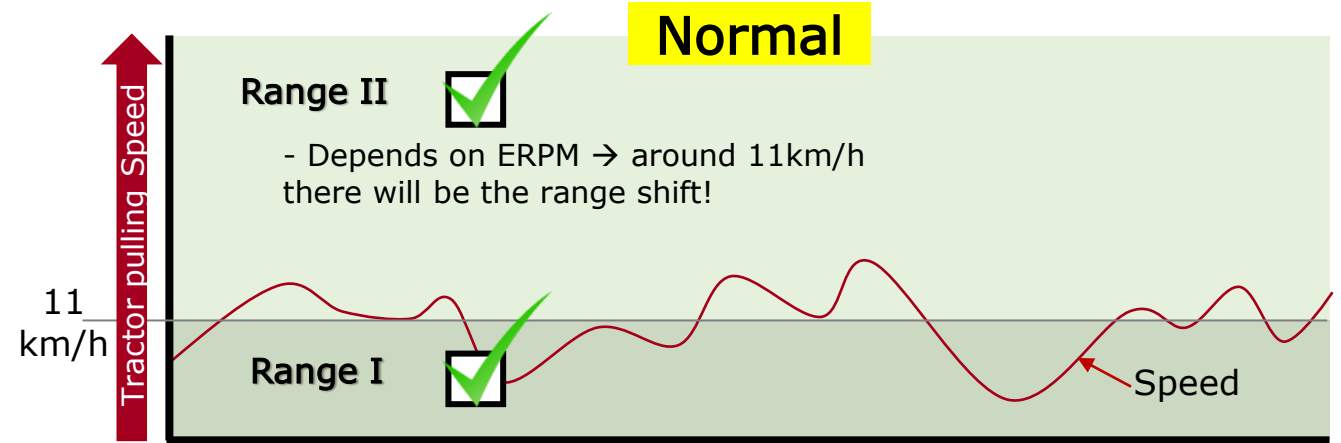
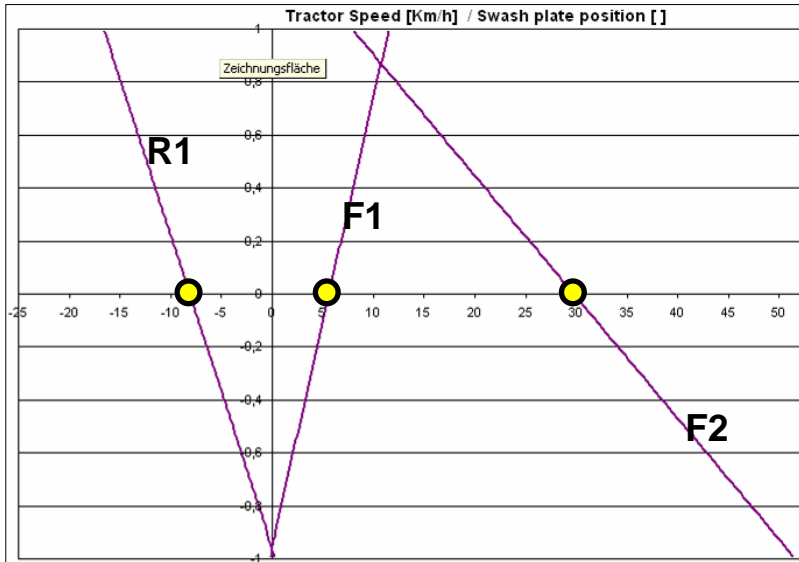


	Vestrum 100 – 130 CVXDrive	Maxxum 125 – 150 CVXDrive	Puma 150 - 175 CVXDrive
Maximum ground speed	43kmh @600/65R38	53kmh @650/65R38	53 kmh 650/65R42
Engine speed for 40 kmh	1.640 rpm	1.600 rpm	1.500 rpm
Engine speed for 50 kmh	N/A	1.800 rpm	1.700 rpm
Minimum ground speed @1.1900 rpm	0,02 kmh	0.03 kmh	0,03 kmh
Minimum ground speed @2.200 rpm	0,02 kmh	0,03 kmh	0,03 kmh
Maximum speed in Range 1 @2.200 rpm	14,5 kmh	12,4 kmh	12,4 kmh
Maximum speed in reverse @2.200 rpm	19 kmh	19 kmh	19 kmh.
Minimum oil reserve in transmission	55 l.	61 l.	64 l.
Maximum oil reserve in transmission	60 l.	68 l.	68 l.
Extra oil reserve in trasmissions	65 l.	75 l.	77 l.

# CVXDrive EcoDraft mode

EcoDraft Function – ‘freezing’ the transmission in Range I for field application.

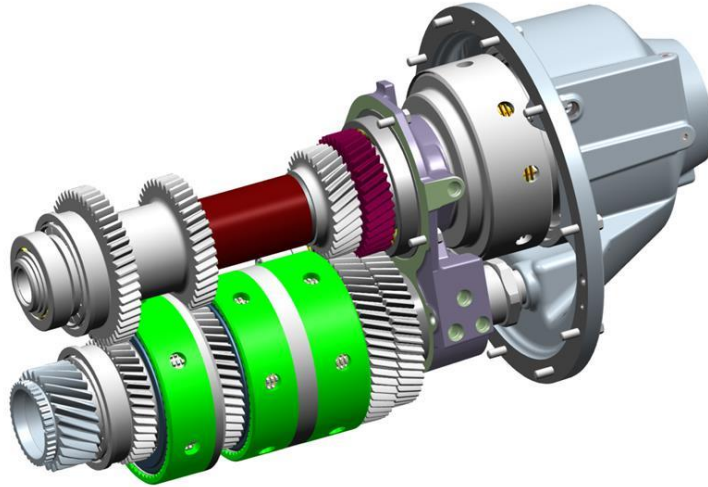
EcoDraft is switched on with Shift + Downshift and switched Off with Shift + Upshift. A small arrow appears next to ground speed in A-Pillar



- Active hold control keeps the tractor safely stopped on upwards or downwards slopes
- APM (Automatic Productivity Management) adjusts rpm and transmission ratio according to power demand and ground speed. Minimizes fuel consumption.
- Low engine rpm for maximum ground speed
- Automatic range change ensures operating at correct gearbox ratio and eliminates operator errors.
- ECODrive allows working at peak pulling performance
- Transmission sensitivity setting related to different applications
- 30m/hour – even at max rpm.
- Manual Mode - transmission is controlled via Multicontroller - engine speed via foot or hand throttle.
- Anti JackKnife: keep the tractor – trailer combination stretched while applying the service brake. Function activation is shown A-pillar display.
- Eco Draft mode – range freeze for heavy pulling application
- Use drive pedal and/or Multicontroller simultaneously. Anytime
- 3 target speeds in each direction
- True power shuttle – direction change under heavy load on hills in full safety
- Transmission updates for MY 2022
  - Better acceleration & deceleration behavior
  - Improved sensitivity of Multicontroller and drive Pedal
  - Better shuttle behavior
- Two different CVX Drive Transmissions available:
  - 391138: Standard 40 KPH ECO CVX
  - 758022: Optional 50 KPH ECO CVX

# SPS/FPS Transmission Offering

- 40 kmh Eco @ 1.600 rpm,
- 40 or 50 kmh versions for both FPS and SPS.
- 6 reverse gears
- Creeper option 28 x 12, min speed
- Dedicated lubrication and oil cooling pump
- Electronic park lock option for both fps sps versions
  - 40 kmh @2.180 rpm
  - Shuttle memory function
  - Drive to gear function
- 18 gears for 40 kmh
- 19 gears for 40 kmh Eco (1.820 rpm) or for 50 kmh
- 12,45 kmh in reverse @2.200 rpm
- Creeper option.
- Maximum removable oil volume 37 l.
- 88 litre oil maximum (extra fill) oil volume in the transmission
- Proportional clutch operation
- Field Mode (5 gears autoishift) and Road mode (up to 18/19 gears autoishift). Road Mode also robotized for SPS version



# FPS/SPS Transmission Options



**Auto Field** - speed range of **6** gears in **range A** (gear 1 to 6) or **range B** (gear 7 to 12). Speed range may be expanded or reduced as desired. Auto Field in standby when rear hitch is raised, shuttle lever moved from forward position or clutch pedal applied.

**Auto Road** - gear 7 to 18<sup>th</sup> or 19<sup>th</sup> when selected while driving in range B (7<sup>th</sup> to 12<sup>th</sup> gear) respectively gear 13 to 18/19 when engaged while in range C. Mode in standby when shuttle lever moved from forward position or clutch pedal applied

**Start off gear** set between 7<sup>th</sup> and 12<sup>th</sup> gear.

**Auto Field** - range of **5** gears between **1** and **14** (2 higher + 2 lower gears plus active gear when Auto Field is engaged). Range may be expanded or reduced. Auto Field in standby when rear hitch is raised, shuttle lever moved from forward position or clutch pedal applied.

**Auto Road** - covers **complete** speed range (18 or 19 gears) with freely selectable **start off gear** between **1<sup>st</sup>** and **12<sup>th</sup>** gear. Mode in stand-by when shuttle lever moved from forward position or clutch pedal applied.

## Standard Transmission Options

- Puma 140/150 → 18x6 40KPH SPS NON AUTO (393097)
- Puma 165 → 19x6 40KPH ECO SPS NON AUTO (393101)
- Puma MC 150-165 → 18x6 40KPH SPS (391136)

PowerDrive		140	150	165
18X6 40KPH FPS	758016	X	X	X
28X12 40KPH FPS + CREEP	758017	X	X	X
19X6 40KPH ECO FPS	758018	X	X	X
29X12 40KPH ECO FPS + CREEP	758019	X	X	X
19X6 50KPH FPS	758020	X	X	X
29X12 50KPH FPS + CREEP	758021	X	X	X

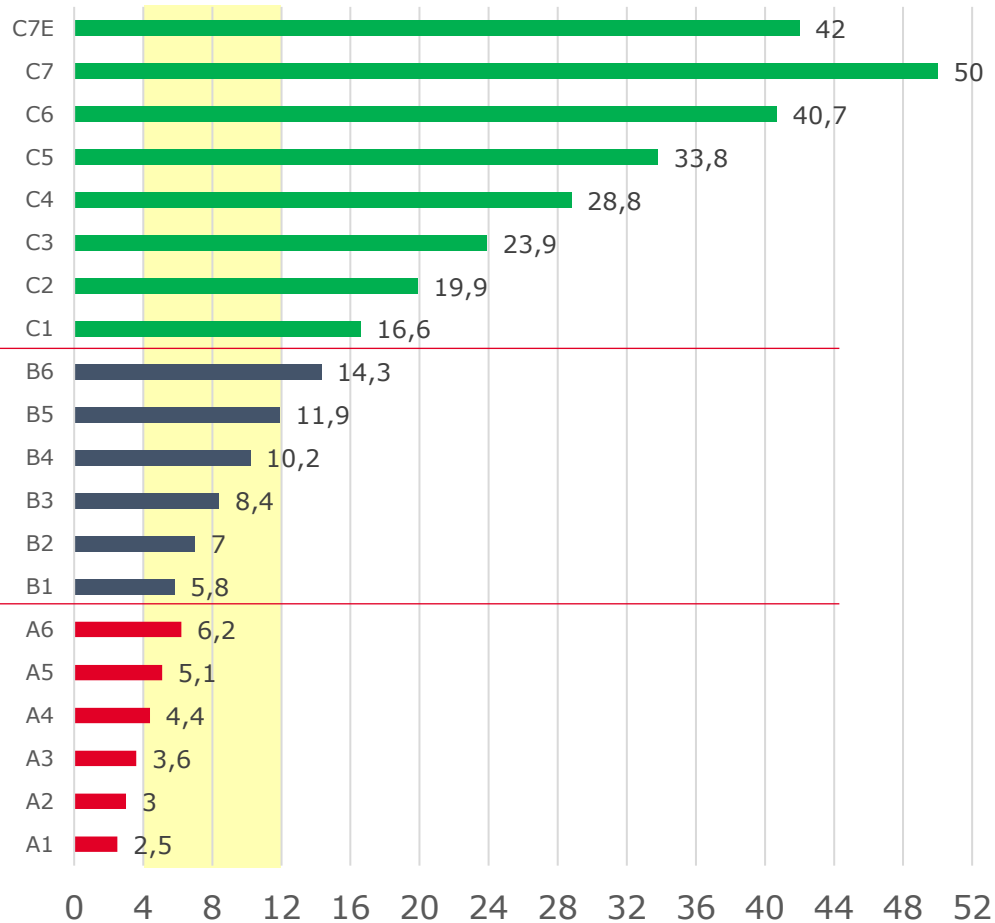
ActiveDrive 6		140	150	165
28x12 40 KPH SPS + CREEP	758011	X	X	
19x6 40 KPH ECO SPS	758012	X	X	X
29x12 40 KPH ECO SPS + CREEP	758013	X	X	X
19x6R 50KPH SPS	758014	X	X	
19x6R 50KPH	759124			X
29x12 50 KPH SPS + CREEP	758015	X	X	
29x12R 50 KPH	759125			X

PARK LOCK option (FPS & SPS)	Option Code
Without electronic park lock	391147
Electronic park lock	758034

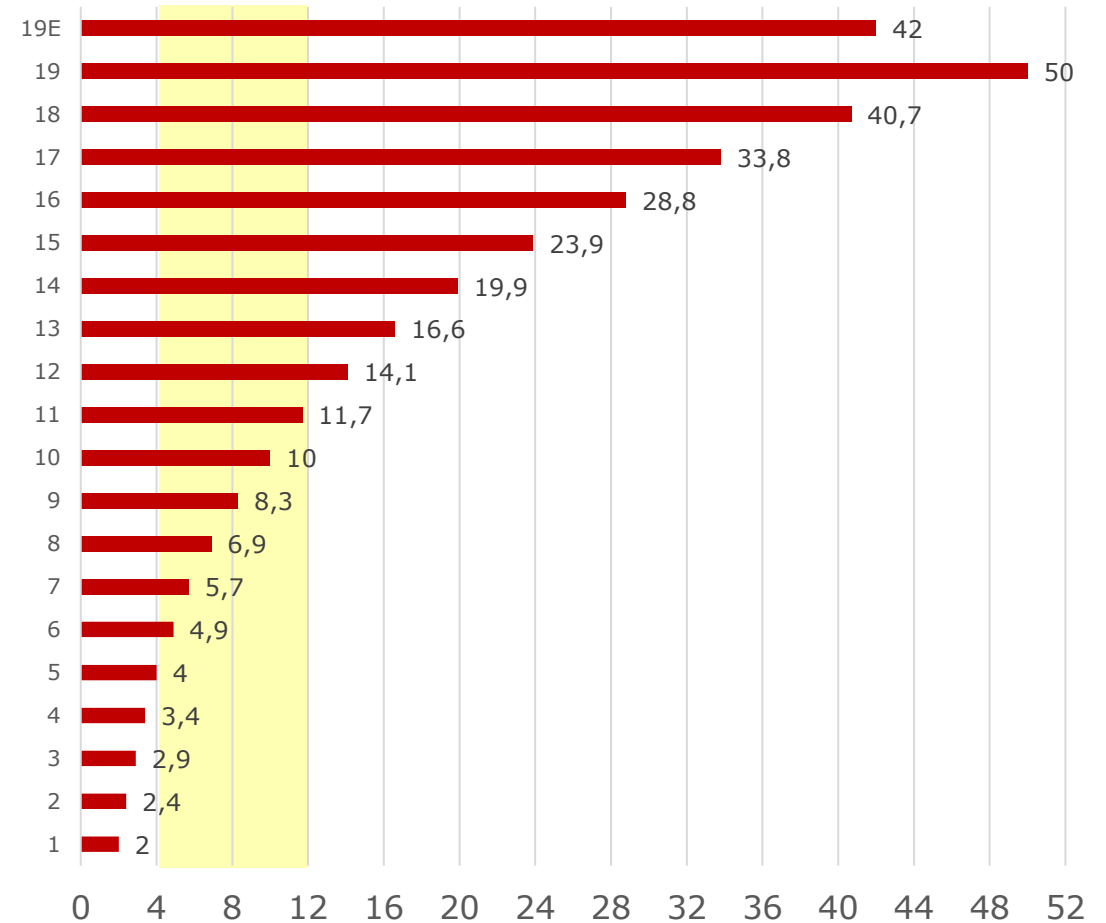
# Power Drive & ActiveDrive 6 Speed Charts



**ActiveDrive6** - Semi-Powershift transmission speeds with rear wheels 650/65R42



**PowerDrive** - Full-Powershift transmission speeds with rear wheels 650/65R42



# Puma Series: Oil - Reserve and Exportable

- All Puma 140 – 175 models have a common oil reserve for the hydraulic system and transmission lubrication.
- Oil specifications are to be respected for maximum durability and performance
- Maximum oil temperature is 110°C for both powershift and CVXDrive models
- Operating oil temperature is - 20°C to 93°C for the hydraulic system.

Oil reserve available inside transmission	Puma 150 – 175 CVXDrive	Puma 150 & 165 Puma 150 & 165 Multicontroller	Puma 140
Normal	64 l.	73 l.	70 l.
Max	68 l.	78 l.	75 l.
Extra	77 l.	88 l.	85 l.

Oil available for external applications	Puma 150 – 175 CVXDrive	Puma 150 & 165 Puma 150 & 165 Multicontroller	Puma 140
Normal	13 l.	8 l.	8 l.
Max	17 l.	13 l.	12,5 l.
Extra	26 l.	23 l.	23 l.

## Scalable Hydraulic System

Hydraulic flows between 110 and 160 l/min.

## Joystick

Two joystick variants. All Puma 140 – 175 models have only electronic controls for the mid-mounts.

## Power Beyond

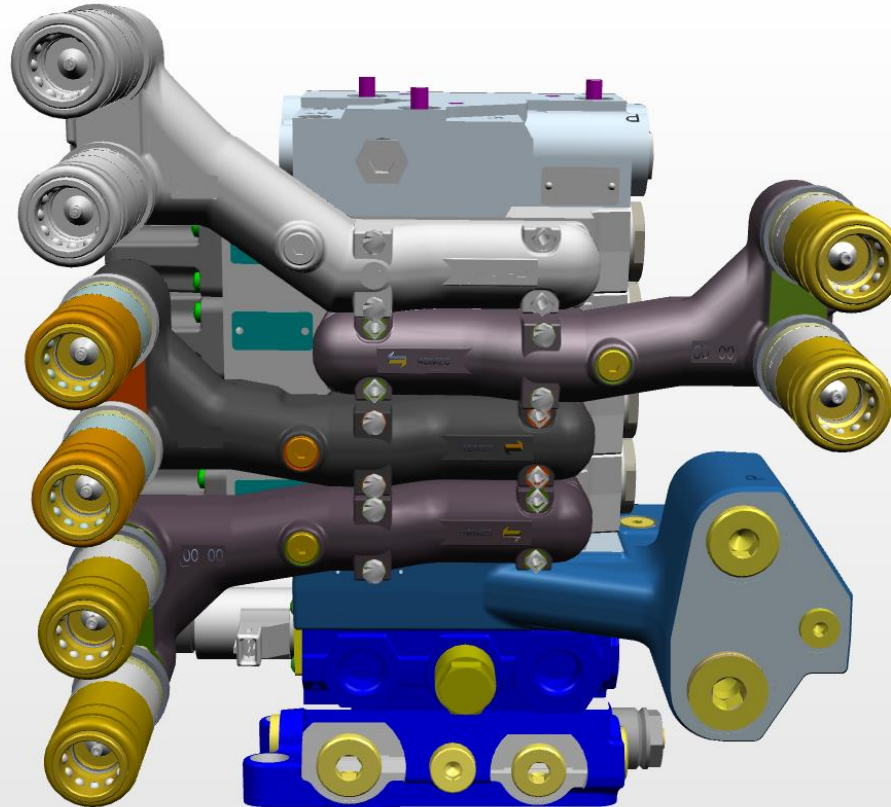
Also available for entry-line models.

## Fully Customized Hydraulic Response

Adjust action time, flow and set priority remotes.

## Hydraulic Efficiency

All Puma 140 – 175 models are fitted with variable flow pumps for maximum efficiency. Energy used wisely.



## Mechanical Remotes

mechanical rear remotes option also for the Multicontroller and CVXDrive models. Three different variable flow pumps for up to 160 l/min.

## Easy setup

User can set up the EH valves via A-pillar and via AFS 700 screen.

## Integrated control

EH remotes can be integrated in both HMC II and in AccuTurn Pro. Adjust once and use the right parameters again and again automatically

## Longer service intervals

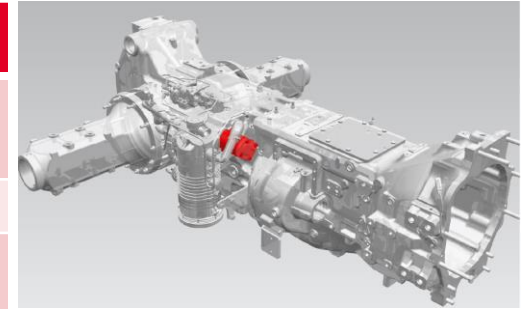
1.500 hours interval for hydraulic oil change. Less maintenance costs.



# Hydraulic System – Pumps & Performance

- All Puma Models feature hydraulic system powered by two different pumps:
  - Variable flow pump for main hydraulics and linkages
  - Fixed flow pump for steering and low pressure system

Capacity & type	25 cm <sup>3</sup> – driveline gear pump, fixed displacement		
Models	Puma 140 – 165	Puma 150 & 165 MC	Puma 150 . 175 CVXDrive
Maximum Flow	67	70	64
Maximum Hydraulic Power	1,2 kW	1,2 kW	2,1 kW



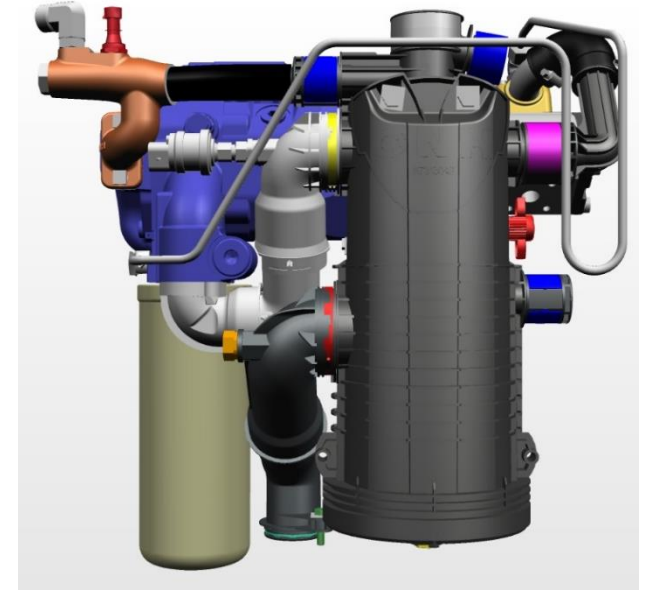
Capacity & type	45 cm <sup>3</sup> – variable flow		56 cm <sup>3</sup> – variable flow		63 cm <sup>3</sup> variable flow
Models	Puma 140 - 150 – 165	Puma 150 – 165 MC	Puma 150 – 165 MC	Puma 150 – 165 – 175 CVXDrive	Puma 150 – 165 – 175 CVXDrive
Maximum Flow	110 l./min.	120 l./min.	150 l./min.	140 l./min.	160 l./min.
Maximum Hydraulic Power	48 kW	50 kW	63 kW	57 kW	64 kW
Maximum flow through one remote	100 l/min	100 l/min	100 l/min	100 l/min	100 l/min

# Hydraulic Pumps

- Closed Centre Load Sensing (CCLS) Variable flow pump.
- instant high flow on demand.
- no demand – no flow = save fuel

Removeable oil for external use statically (level @ min. / max. / extra):

- SPS / FPS Transmission: 22 / 27 / 37
- CVT Transmission: 31 / 35 / 45



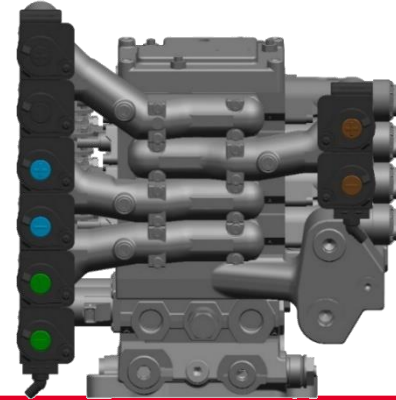
		PUMA	PUMA MC	PUMA CVX
391160	110 L/MIN PUMP	D	D	-
762032	150 L/MIN PUMP	-	X	-
391161	120 L/MIN PUMP	-	-	D
758055	140 L/MIN PUMP	-	-	X
758935	160 L/MIN PUMP	-	-	X

D standard; X optional

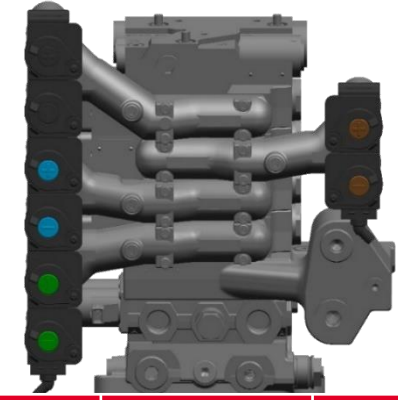
# Rear Remotes

- Puma tractors offer a huge variety of both mechanical or electrical remote valves.
- Intuitive, easy operation with levers on side console (mechanic remotes) or dedicated paddle levers or buttons on Multicontroller armrest, also with configurable operation mode (comes with option HMC 2).

▪ Mechanical version:



▪ Electrical version:



		Puma	Puma MC	Puma CVXDrive
<b>Mechanical</b>				
392747	2 RR MHR – NON CONFIG DETENTS	D	-	-
759365	3 RR MHR - NON CONFIG DETENTS	X	-	-
759366	4 RR MHR - NON CONFIG DETENTS	X	-	-
391163	2 RR MHR – CONFIG DETENS (ALL)	-	D	-
391164	3 RR MHR - CONFIG DETENS (ALL)	-	-	D
758057	3 RR MHR - CONFIG DETENS (ALL)	X	X	-
758058	4 RR MHR - CONFIG DETENS (ALL)	X	X	X
<b>Electronical</b>				
758059	3 RR EHR	-	X	X
758060	4 RR EHR	-	X	X
758061	5 RR EHR	-	X	X

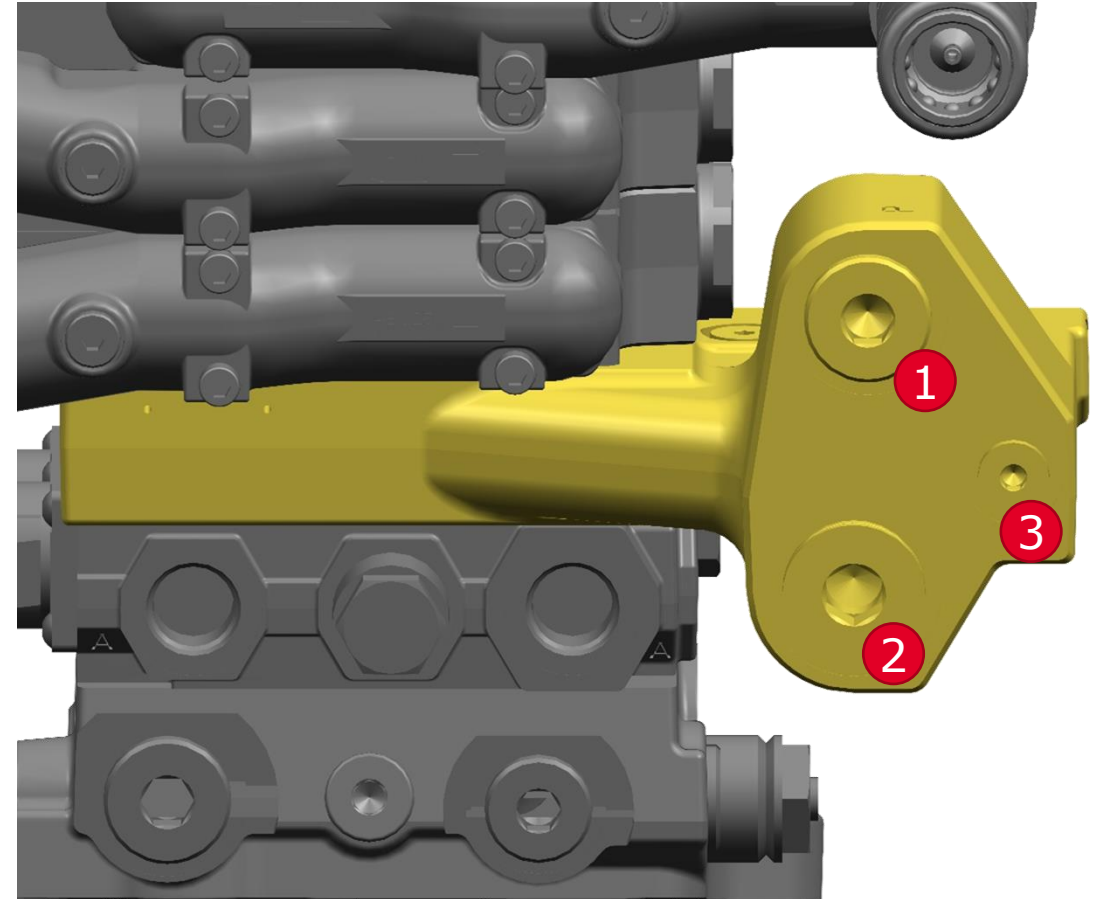
D standard; X optional

# Power Beyond

- Power Beyond & low pressure capability provided by couplers conforming to ISO 4123
  - 1. Power Beyond Pressure
  - 2. Motor Return
  - 3. Load Sense Line
- Independent flow control valve
- Allows the implement system to be at a low pressure until demand is sensed by the LS line
- hydraulic cylinders, planter vacuum fans, spray pumps
- No pressure/flow compensation

## Options

X0243XX	LESS REAR POWER BEYOND
758062	LOW PRESSURE RETURN Q/COUPLER
758063	LOW PRESSURE RETURN AND ISO P BEYOND



# Remote Valves

- Up to 4 valves are controlled with paddle levers and up to 4 valves with the joystick.
- 1 valve operated on Multicontroller. Default is rear remote 1, respectively 5 with 5 rear mounted valves or 2 with option front hitch management.
- Option HMC II includes configurable settings, so any valve can be placed on the Multicontroller, rear remote 5 on any paddle lever.
- Default operation mode for mid-mount valves is the joystick.
- Operation of all valves can be stored and executed with HMC.
- Possibility to change operation of rear/mid-mount valves from paddles to joystick (and vice-versa) by pressing dedicated icon on ICP.



Number of remote valves	Puma 140, 150, 165	Puma Multicontroller 150, 165	Puma CVX 150, 165, 175
Standard mechanical remote valves (not configurable).	2, 3, 4	-	-
Mechanical remote valves with configurable detent.	3, 4	2, 3, 4	3, 4
Electro hydraulic remote valves	-	3, 4, 5	3, 4, 5
Mid mounted electrical remote valves	1, 2, 3	1, 2, 3	1, 2, 3

# Mechanic Rear Remote Valves

- Operator can change the lever setting / functions.
- Adjustment to specific job tasks improves productivity, safety and comfort.
- Configurable detents for all valves (float, kick-out, constant flow, oil motor mode).
- Flow volume adjustable, max. flow through one valve 95 l/min.
- Power beyond couplers with low pressure return connection as option.



- I. Raise, Neutral, Lower and Float positions available. Detent position in Float only. No lever auto return to neutral (kick out).
- II. Raise, Neutral and Lower positions only. No Float position. No detent positions available. No lever auto return to neutral (kick out).
- III. Raise, Neutral, Lower and Float positions available. Detent position in Raise, Lower and Float. Lever auto return to neutral (kick out).
- IV. Raise, Neutral, Lower and Float positions available. Detent position in Raise, Lower and Float. No lever auto return to neutral (kick out).
- V. Lower and Float positions available. Detents in Lower and Float (oil motor mode). No lever auto return to neutral (kick out).

- A joystick is optional available to control several remote valves at the same time.

### 758068 Joystick with 3 buttons.

- Grey and green button for IsoBus AUX N or external 3rd function (front loader).
- Black button to select between layer and for IsoBus AUX N.

### 758070 Joystick with rocker switch to control 4 proportional remote valves.

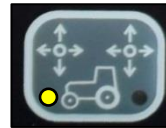
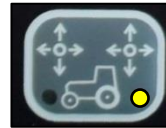
- Proportional control of up to 4 remote valves (shift button).
- Speed range change by a button on the joystick
- The joystick is easy to reach on the armrest. Operation is ergonomically to work long days.
- A button on the control panel allows the operator to select between front or rear remote valve operation!

### 763173 Joystick 3 Button advanced

- Integrated 3<sup>rd</sup>, 4<sup>th</sup>, 5<sup>th</sup> function
- Advantage of speed range change on the joystick
- Forward and reverse driving selection button

### 763174 Joystick proportional advanced

- Speed range and driving direction change via buttons located on the joystick
- Control of up to 4 remote valves with the proportional switch.



Options	
391169 (Standard)	NO JOYSTICK
758068	JOYSTICK 3 BUTTON
758070	JOYSTICK PROPORTIONAL
763173*	JOYSTICK 3 BUTTON ADVANCED
763174*	JOYSTICK PROPORTIONAL ADVANCED

\* only available for MC and CVX

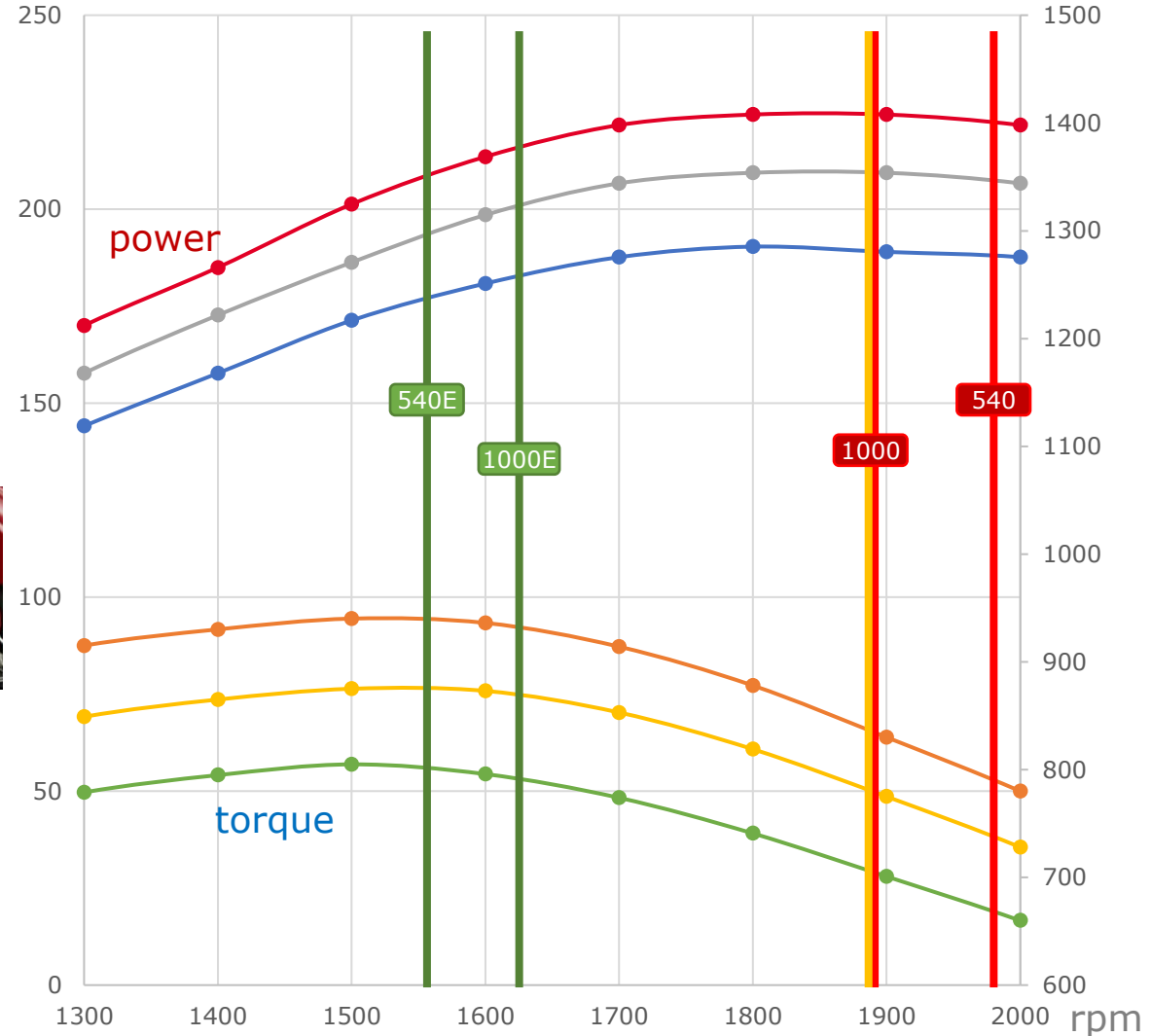


Options	
391168	LESS MID MOUNT EHR VALVES
758064	1 MM EHR
758065	2 MM EHR
758066	3 MM EHR

- Auto soft start function standard.
- Interchangeable PTO shaft with 6 and 21 splines.
- Shaft size 1 3/8".
- Automatic PTO brake engagement when PTO is turned off.
- PTO brake can be shut off by pressing dedicated button on speed selection lever or with spring loaded switch on right hand side console.
- Alternatively, the PTO brake actuation can be delayed by a set time value using HMCII.
- Rear Fender Mounted PTO Actuation – After activating the PTO intension switch in cab keeping the external button pressed for more than 5 seconds switches PTO on permanently.















Option						v1	v2	
391139 758023 758024	rear	540/540E/1000 (opt. GS)	3	540	1969			
				540E	1546			
		540E/1000/1000E		1000	1893			
		540E/1000/1000E		1000E	1621			
	front	1000	1	1000	1893			

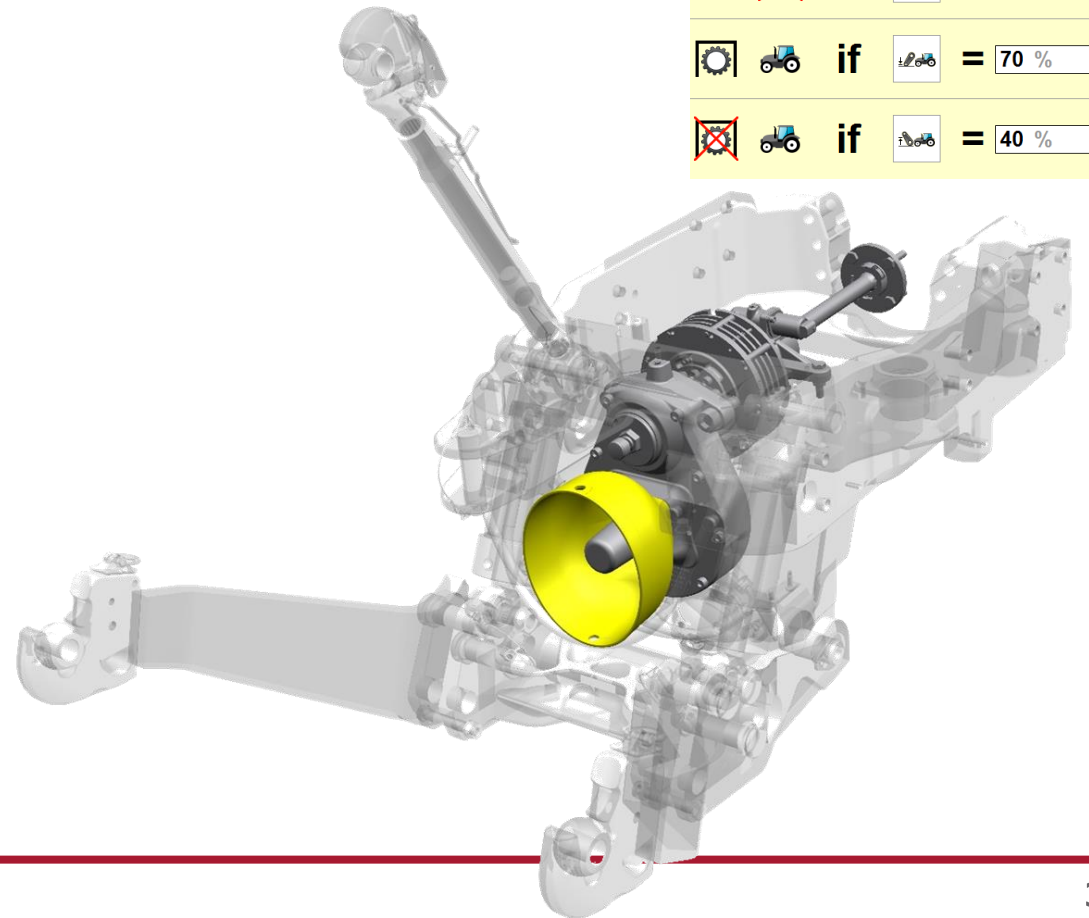




# Front PTO

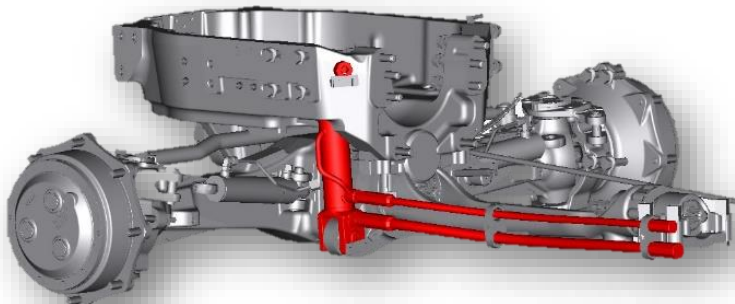
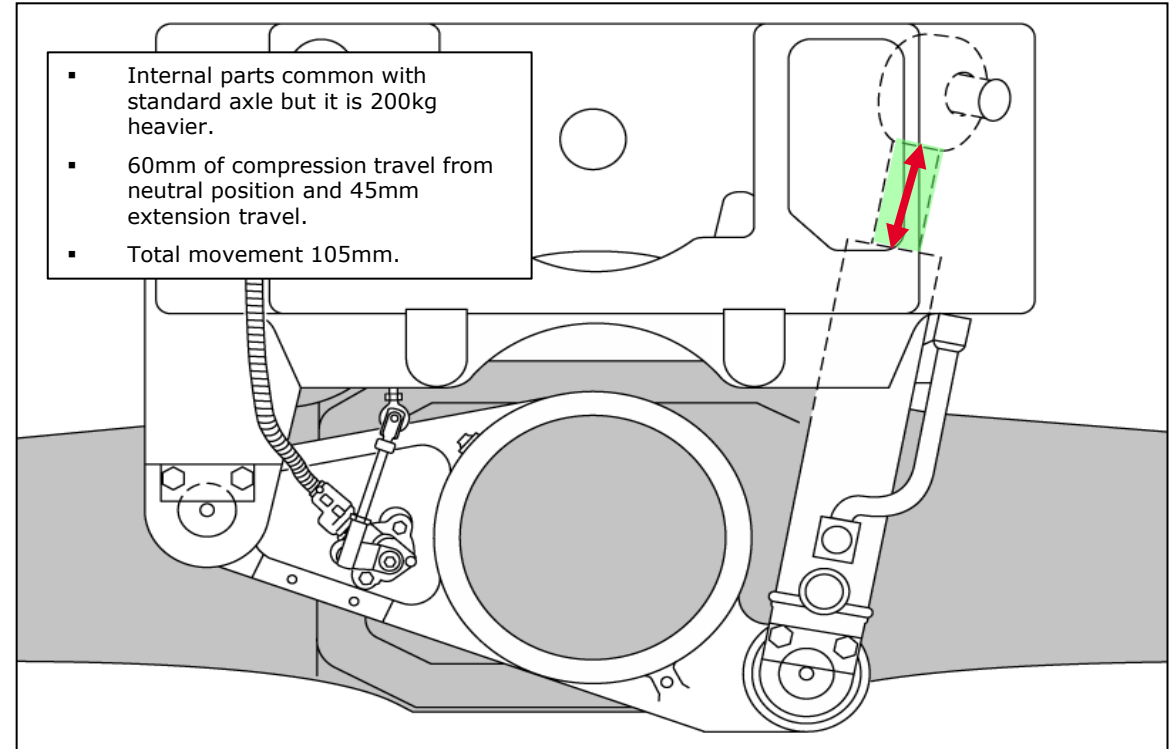
- An integrated powerful front PTO is available from the factory.
- Max. capacity:
  - Puma 150 – 175: 122hp
- Front PTO speed aligned with maximum engine power (1.850 to 1.900 rpm).
- Dry multi disc clutch for Puma 150 - 175.
- Electro-hydraulic actuation.
- Directly driven from the crankshaft.
- Direction of rotation: anti-clock wise (seen from the front).
- Retrofittable DIA kit (only with front linkage).
- Both rear and front (with option front hitch management) PTO can switch off and on dependent on hitch position.
- With option HMC II the engagement and disengagement of the PTO can also be triggered.

Auto PTO	
Implement	Work Condition
DRILL	DRY
  if  = 70 %	
  if  = 35 %	
  if  = 70 %	
  if  = 40 %	



# Front Axle

- All Puma models with short wheelbase feature heavy duty front axle class 3.5  
Max. unrestricted operating weight 4.900kg  
Max. load @ speeds below 8km/h 8.000kg.
- Electro-hydraulic 4WD engagement, diff-lock, fully locking, simultaneously operated with rear diff-lock.
- No spin out as with limited slip diff versions.
- Front axle suspension and brakes available as option (standard with 50kph models).
- Oscillation 11°.
- Damping is controlled via pressurized 2 nitrogen accumulators and regenerative valve system.
- PUMA CVX suspension will automatically adjust and increase system pressure if extra weight is added to the tractor i.e. front implement attached.
- The suspension does not 'compress', the neutral position will remain thus maintaining the full travel available.
- **Front to rear axle ratio: 1,323.**



Front axles	Option
STANDARD CLASS 3.5 AXLE	391156
CLASS 3.5 AXLE/SUSP	758045
CLASS 3.5 AXLE/SUSP/BRAKES	758046

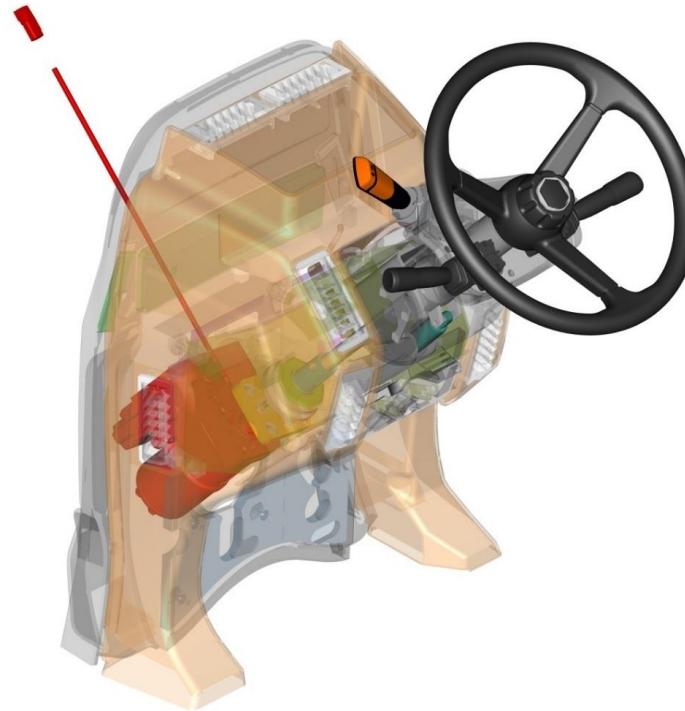
# Steering options

## Reactive Steering

- The steering system features a servostatic unit that allows the steering system to operate in a reactive mode.
- This means that the wheels return to straight forward position after driving around a curve.
- Available for all steering options:
  - 391630: Standard steering.
  - 759185: Guidance ready / complete.
  - 759186: Adaptive steering control ASC
  - 759187: Adaptive steering control ASC and guidance ready / complete.

## Adaptive Steering Control (ASC):

- Allows the operator to choose a steering ratio through pre-set options.
- Custom settings are also available via monitor.
- The steering system reduces the amount of steering wheel rotations required to go from steering lock to lock.

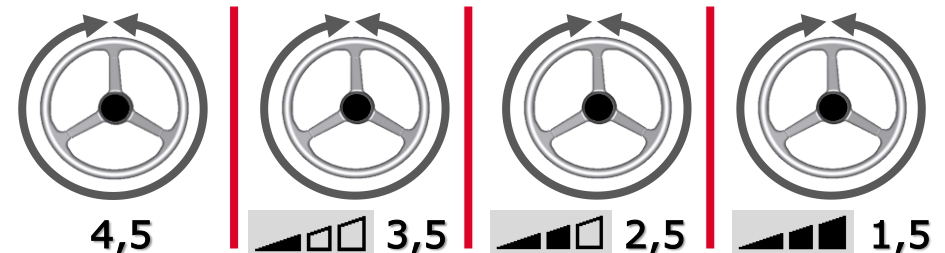


### Steering switch ON:

- Tractor speed <37 km/h = Adaptive Steering Control is on.
- Tractor speed >37 km/h = Adaptive Steering Control is in standby down to <26 km/h.

Note: When Adaptive Steering Control is enabled the steering behavior becomes non-reactive (the wheels will not return to straight forward position).

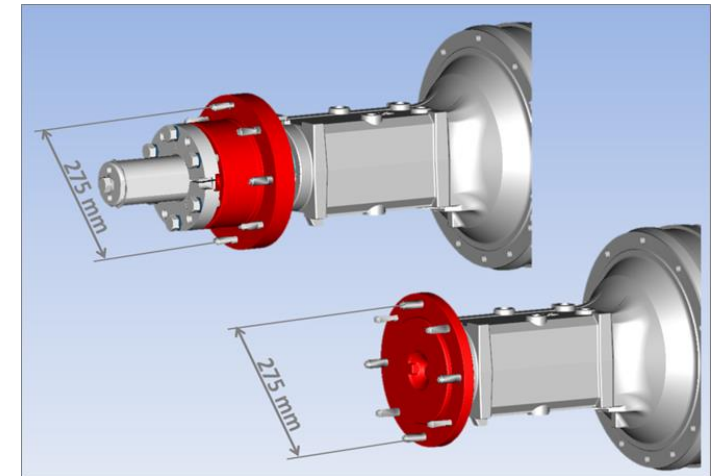
Adaptive steering: Steering wheel turns from fully left – fully right:



# Rear Axle

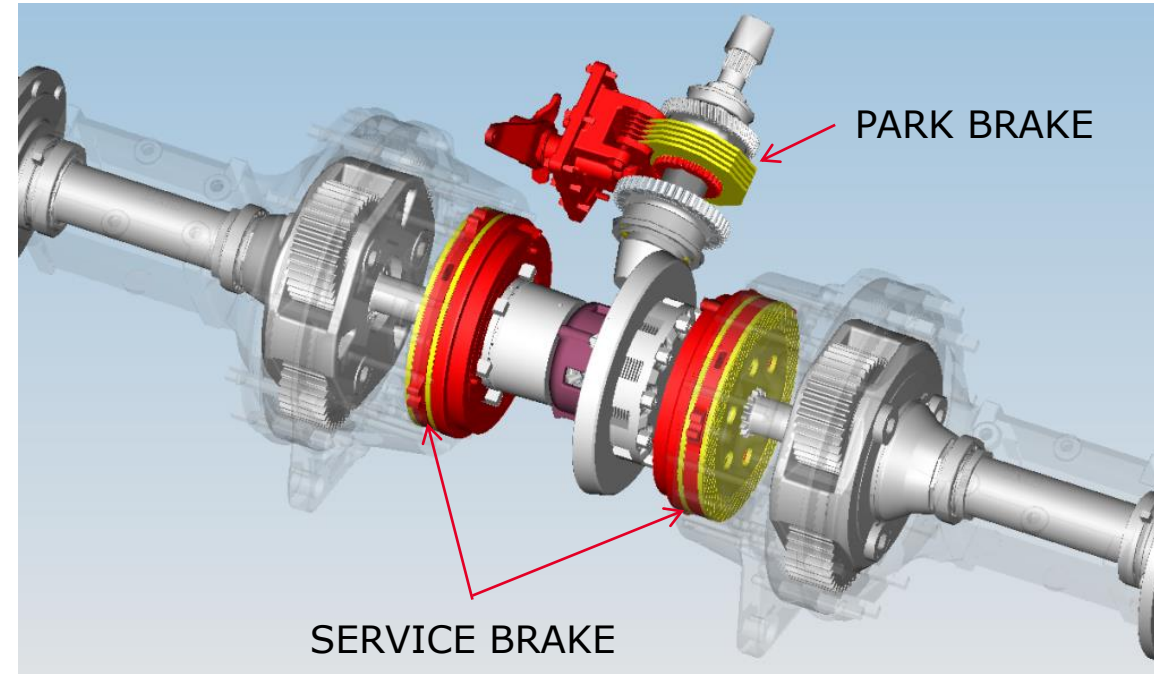
- All rear axles are produced in-house.
- Axles available:
  - **391158** Flange rear axle.
  - **758052** 98" Bar axle for easy rear track setting.
  - **758053** 112" Bar axle MC and CVX only
- The heavy-duty rear axle is standard for Puma 150, 165 and 175. This allows fitting of 42" tyres
- Flange type axle standard, 98" bar axle optional
- Maximum permissible weight: 8.500 kg
- Puma 150 - 175 also feature the Case IH standard flange with 275 mm diameter for both flange and bar axle.
- Electrohydraulic operated rear and front multiplate differential locks.
- Auto mode switches off/on dependent on steering angle, rear hitch position, steering brake and ground speed (switches permanently off above 15km/h).

	Flange Axle	Bar Axle
Flange to flange	1.870 mm	1.870 mm
Bar axle flange to flange (adjustment range per side)	-	1.970 – 2.170 mm (100mm per side)
Bar axle length	-	2.489 mm
Bar axle diameter	-	105 mm
Diameter of bolts (1)	M18 x 1.75	M18 x 1.75
Torque	341 Nm	341 Nm
Centre hole clearance (2)	221 mm	221 mm
Diameter to bolts (3)	275 mm	275 mm
Number of bolts	8	8
Maximum permissible rear axle weight	8.500 kg	8.500 kg



# Brakes

- Hydraulically operated wet disc balanced system, self adjusting and equalizing. Brake discs inside trumpet housing. Separate left and right foot brake pedal control for narrow turns on headland.
- Automatic engagement of front wheel drive for true four-wheel braking when both pedals are applied simultaneously.
- Single brake discs version for Puma 140—165 SPS and FPS models. All other models feature dual discs on each side.
- All discs are also available in HD as **extended life brakes**.



Option	Axle	Puma	Puma MC	Puma CVX
391212	Single Brake Disc	D	D	-
391224	Dual Brake Discs	-	-	D
758203	Single HD Brake Disc	X	X	-
758204	Dual HD Brake Discs	-	-	X

# Advanced Trailer Brake (CVXDrive Models)

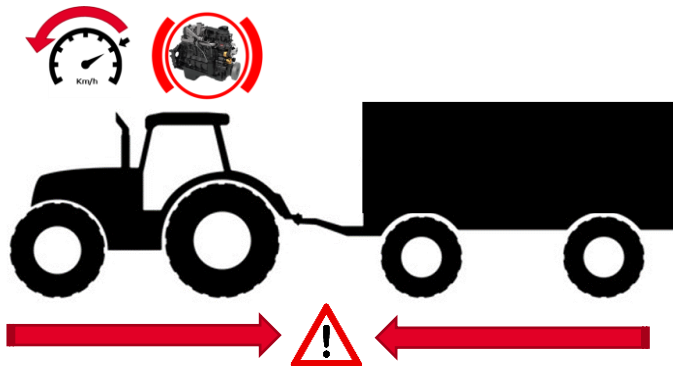
- Improves the tractor and trailer stability during breaking and speed reduction via engine and transmission, particularly on slippery surfaces.

Available for following tractors equipped with pneumatic trailer brakes:

- Optum, Puma and Maxxum with CVXDrive transmission.
- When the tractor and trailer slow down by transmission and engine, no braking occurs on the trailer - the trailer may ends pushing the tractor and creating hazards.

		CVXDrive		
393095	LESS TRAILER CONTROL FEATURES	D	D	D
762071	ADVANCED TRAILER BRAKE	X	X	X

D standard; X optional; - not available



# Advanced Trailer Brake (CVXDrive Models)

- The system adjusts the brake force applied with a measurement of transmission input torque, based on the flywheel torque sensor and Engine Control Unit data.
- Trailer is braked with the appropriate amount in order to improve the stability of the tractor and trailer combination.
- If the system automatically applies the brakes, the brake lights are illuminated.

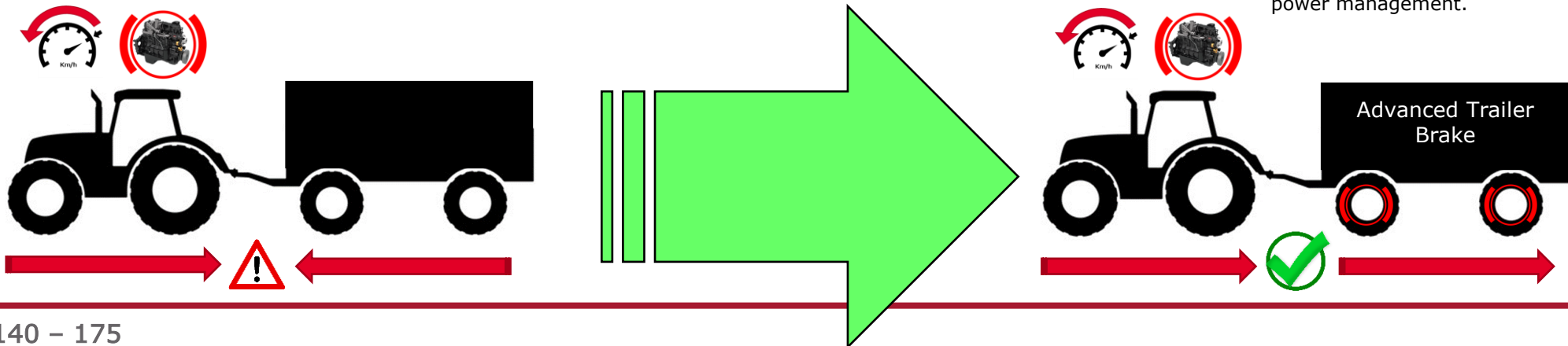
Automatic activation conditions:

- System enabled in the monitor. Disabling only with tractor stopped.
- Traveling in forward direction at speeds below 35 km/h.
- Speed delta between actual speed and requested speed exceeds a threshold.
- The system works without additional sensors on the trailer. It is compatible with all pneumatic braked trailers. It also includes trailers with advanced ABS technology.

Implement setup	
Operation	Implement
Other	TRAILER
Task	Work Condition
S-Brake	
Enable	Disable
Implement Type	
Rear Hitch	
Impl. Width	Swath Width
2.550 m	2.550 m
Impl. Offset	Bar Distance
0.000 m	0.000 m

**Deceleration Force:**

Calculated from the flywheel torque sensor and Engine Control Unit. This sensor is also used to enable the engine power management.

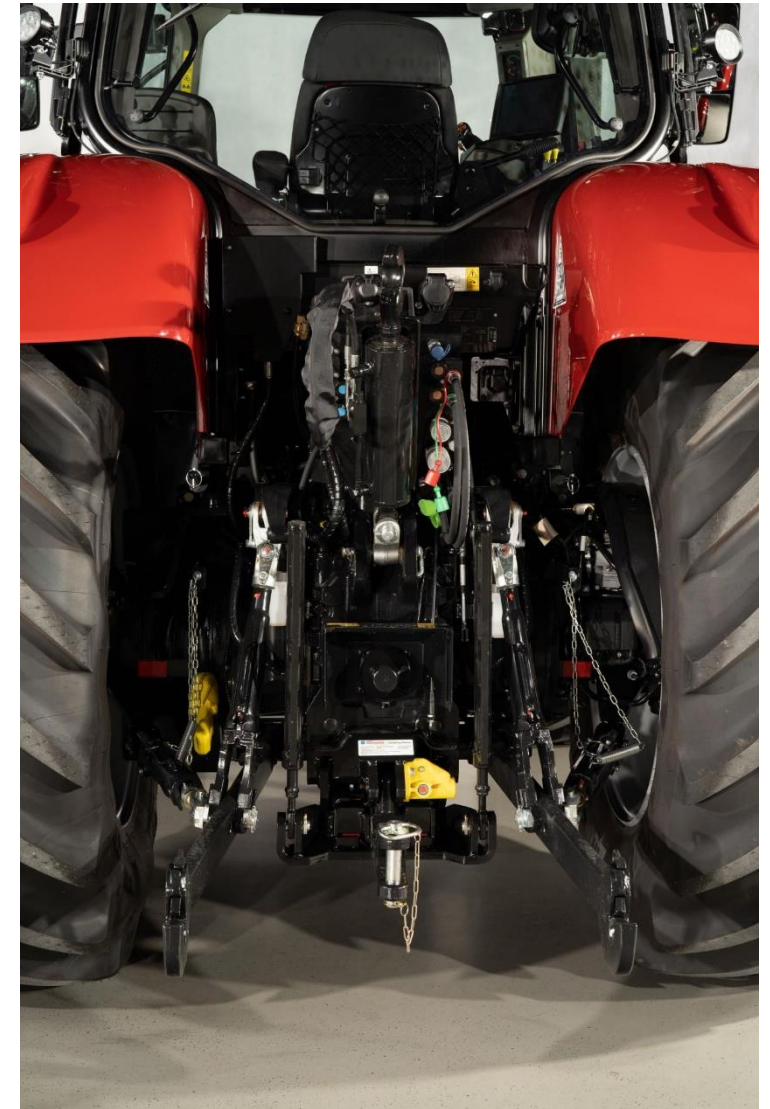


# Rear Linkage

- Cat 2/3 linkage
- Max. Lift Capacity at ball ends / 610mm back through whole lift range:
  - 90mm rams 6687 kg / 5362 kg
  - 100mm rams 8257 kg / 6616 kg
- Easy disconnecting of implements. Rear hitch push down with 5 bar.
- To aid hitching and leveling of implements, both lift rods are adjustable and are slotted at the base for floatation.
- Manual or automatic external lower link stabilizers which blocks the side-movement of the lower links when raised, but also allow the implement to float free sideways when lowered.
- Improved stability and fixing of the top link
- Implement electrical sockets in a more ergonomic position for the operator
- Redesigned remote coupler and drain bottle hoses

## Rear Hitch

391170	2x 90MM CAT 2/3 QUICK + MECH TOP LINK
758071	2 X 90MM CAT 2/3 QUICK + HYD TOP LINK
758075	2 X 100MM CAT 2/3 QUICK + MECH TOP LINK
758076	2 X 100MM CAT 2/3 QUICK ATTACH+HYD TOP LINK





# Trailer Hitch and Drawbar

## 390 mm wide frame

- Easy PTO shaft connection due to the wide ladder frame.

## Automatic coupling

- Automatic coupling for easy implement connection. The in cab remote control enables an opening of the automatic hitch from the cab.

## Modular design

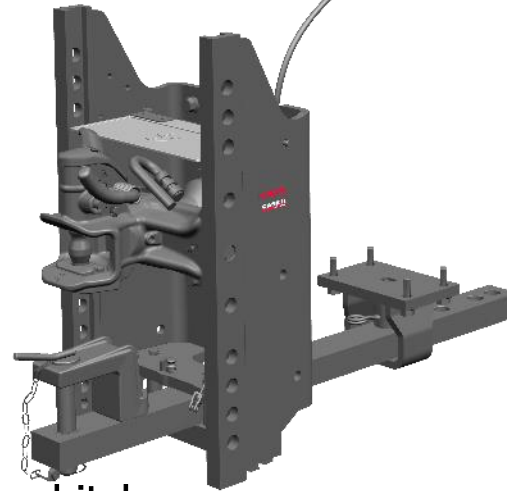
- Different types of towing equipment can be inserted in the slider frame.

## Cat 2 / 3 drawbar

- Drawbar can be converted to Cat 3 by removing a bushing.

## Pick up hitch

- Dedicated diverter block to operate the push back cylinder. No blocking of an proportional rear remote valve.



## K80 ball

- No shocks from the implement allows a stress free operation.
- K80 ball and Piton fix coupler inserts with improved, one hand height adjustment.
- Drawbar with K80 ball allows a narrow turning when on the extend position.

- Cat 2/3 lower links, Cat 2 top link
- Two external lift rams.

OECD lift capacity :

- Puma 150-175
  - at ball ends, full range 3.568kg
  - 610mm to the front 3.364kg
- Choice of connection to rear remote valves or mid mounts.
- FHPL operated by either one mechanical rear remote valve (#1), respectively one electrical rear or mid-mounted valve.
- FHPL operated by electrohydraulic remote valves possess external raise/lower switches in front support.
- Cat. 2-3 lower link arm allow use of Cat. 3 balls.
- On the front side of the front hitch there are following electrical connectors:
  - 3 pin Euro connector
  - 7 pin lighting socket

## Front linkage management

- If front linkage is connected to mid mount valve option front hitch management can be ordered
- Working position and maximum lifting height can be set and the FH can be moved with the Multicontroller (shift + rear hitch buttons)



# Cabin

- The cab structure has a four-post roll over protection with minimal visibility restrictions.
- The cab can be fitted with the common high, the NEW high visibility roof or the low roof.
- Easy entry in cab via wide opening doors and the new designed entry steps.
- It has 5,45 square meters of tinted glass plus optional 0,42 m<sup>2</sup> tinted roof window for excellent operator comfort and visibility.
- A tough rubber mat, allowing it to be washed out with a low-pressure hose, protects the flat floor.
- The **cab suspension (STANDARD)** system has been tuned to work in conjunction with the front axle suspension system.



## External airline

393161	NO EXTERNAL AIR LINE
758808	EXTERNAL AIR LINE
763144	EXTERNAL AIR LINE TWO PORTS

# Cab Updates

- Ergonomic cab entry
  - New magnum styled aluminium steps
  - An external battery master switch along with an external Airline
- First with the new leather steering wheel
- New design and position of the indoor mirror
- The wiper comes with a new Design and a 60% bigger coverage than the previous model
- New better performing indicator & wiper stalk
- Cooled storage compartment for long working days
- New monitor Rail (for Tablets, phones, ...) with two USB sockets.
  - RAM® holder is available from factory



# Lights

- New modern Led indicators and beacons
- High mounted roadlights are also available for better sight when implements are carried on the front linkage (Option: 758998)
- The work lights are configurable in following options:



Option Code	Front Roof	Rear Roof	Grabrail front	C Pillar	Hood	Puma	Puma MC	Puma CVX
393119	2 (H)	2 (H)	-	-	4 (H)	D	-	-
393120	4 (L)	4 (L)	-	-	4 (H)	-	D	D
762237	4 (H)	4 (H)			4 (H)	X	-	-
762238	4 (L)	4 (L)			6 (H)	X	-	-
762239*	4 (L)	6 (L)	2 (L)	2 (L)	6 (H)	X	X	X
762240*	4 (L)	6 (L)	2 (L)	2 (L)	6 (L)	-	-	X

- D= Standard
- X= Option
- - = not available

▪ \* requires HIGH INTENSITY ROOF (

# Cab Packages



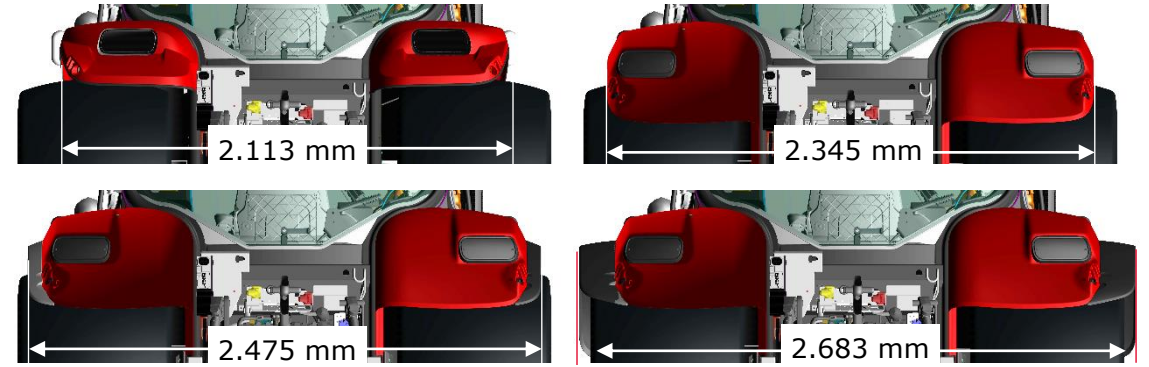
Available for	Puma	Puma	ALL	ALL	ALL	ALL	ALL	Puma MC, CVX	Puma MC, CVX
FEATURE	Base Comfort Pack 392751	Base Comfort Storage 759936	Standard Comfort Pack 759937 Puma 391357 MC/CVX	Standard Comfort Storage Pack 759266	Standard Comfort Pack ATC 759264	Deluxe Fabric Comfort Pack 758265 Puma 763224 MC/CVX*	Deluxe Fabric Comfort Pack AC 759265 Puma 763225 MC/CVX*	Deluxe Leather Comfortpack 2 763226*	Active Leather Comfort Pack 2 763227*
Air condition control	Manual	Manual	Manual	Manual	Automatic	Automatic	Manual	Automatic	Automatic
Standard fabric seat	Yes	Yes	Yes	Yes	Yes	-	-	-	-
DeLuxe fabric seat with Dual Motion headrest	-	-	-	-	-	Yes	Yes	-	-
DeLuxe leather seat with Dual Motion headrest	-	-	-	-	-	-	-	Yes	-
Active leather seat with Dual Motion headrest	-	-	-	-	-	-	-	-	Yes
Passenger seat	-	-	Cloth	-	Cloth	Cloth	Cloth	Leather	Leather
Storage box in place of the passenger seat	-	Yes	-	Yes	-	-	-	-	-
Multicontrol armrest adjustment	Manual	Manual	Manual	Manual	Manual	Electrical	Electrical	Electrical	Electrical
Steering wheel	Standard	Standard	Standard	Standard	Standard	Leather	Leather	Leather	Leather
Case IH branded carpet	-	-	-	-	-	Yes	Yes	Yes	Yes
Rear sunshade	-	-	-	-	-	Yes	Yes	Yes	Yes
Front sunshade	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cab suspension available	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Standard	Standard
Tinted rear window	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

\*New Case IH leather steering wheel MC and CVX only

# Fenders & Tires

## Rear fenders:

- 391205 narrow rear fenders.
- 758181 full coverage rear fenders.
- 758182 full coverage rear fenders and 75 mm extension.
- 758183 full coverage rear fenders and 180 mm extension.



## Front Fenders

- XT8740X LESS FRONT FENDERS
- 758969 420MM DYNAMIC FENDERS
- 758970 480MM DYNAMIC FENDERS
- 758971 540MM DYNAMIC FENDERS
- 758972 620MM DYNAMIC FENDERS
  - All front fenders are of dynamic type (= steerable) and adjustable to the tire width.



391146	EDC AND PTO CNTRLS
758033	EDC AND PTO CNTRLS +REHR#3

Tire GROUPS		
Tire Groups	Avg. diameter	Puma
44	1.650mm	
45	1.750mm	X
46	1.850mm	X
47	1.950mm	X
48	2.050mm	
49	2.150mm	

- Three different ground types of loaders available:
  - A-Range loaders:
    - Entry level loaders
    - Not available for the Puma 140-175 models
  - U-Range loaders
    - Mid-range loaders
    - Versatile and durable Front loaders for everyday handling
    - Extra crowd back angle at 1,2m (up to 71°)
  - T-Range loaders
    - Premium loaders
    - Designed for intensive handling work.
    - AUTO-UNLOAD System
      - Simultaneous grab opening and bucket dumping
- Both, T-Range and U-Range loaders, come with MACH System multicoupler and Fitlock 2 System. Which are important for a fast and efficient way to hitch/unhitch the loader.
- Standard for the U- and T-Range loaders is an Euro Quick Attach implement carrier, Fast-Lock hydraulic implement locking is optional.
- Multiple implements available for the whole range of loaders:
  - 11 different Buckets
  - 7 Forks and grabs
  - 12 implements for bale works
  - Several specialized implements (forestry, sugar cane,...)





# Loader ready

- 763252: New „front loader ready“ option
  - Robust and integrated construction
  - Strong side post towers for FIT-Lock hitching and MACH multi quick coupler System
  - Robust crossbar and engine hood guard
- 763251: Engine side rails
  - Prediposition for loader ready
  - Provide reinforcement of the chassis when used for heavy applications
- Wide range of front loaders offered with the new Puma 140-175 models
  - Lifting height: 4,2-4,6m
  - Lifting weight: 1,9-2,7 tons

Loader	Max height	Max Weight	Selfleveling
L4219U	4,2m	1900kg	Mechanical
L4222U	4,2m	2200kg	Mechanical
L4522U	4,5m	2200kg	Mechanical
L4223T*	4,2m	2300kg	Hydraulic
L4225T*	4,2m	2500kg	Hydraulic
L4522T*	4,5m	2200kg	Hydraulic
L4627T*	4,6m	2700kg	hydraulic

## AccuGuide ready:

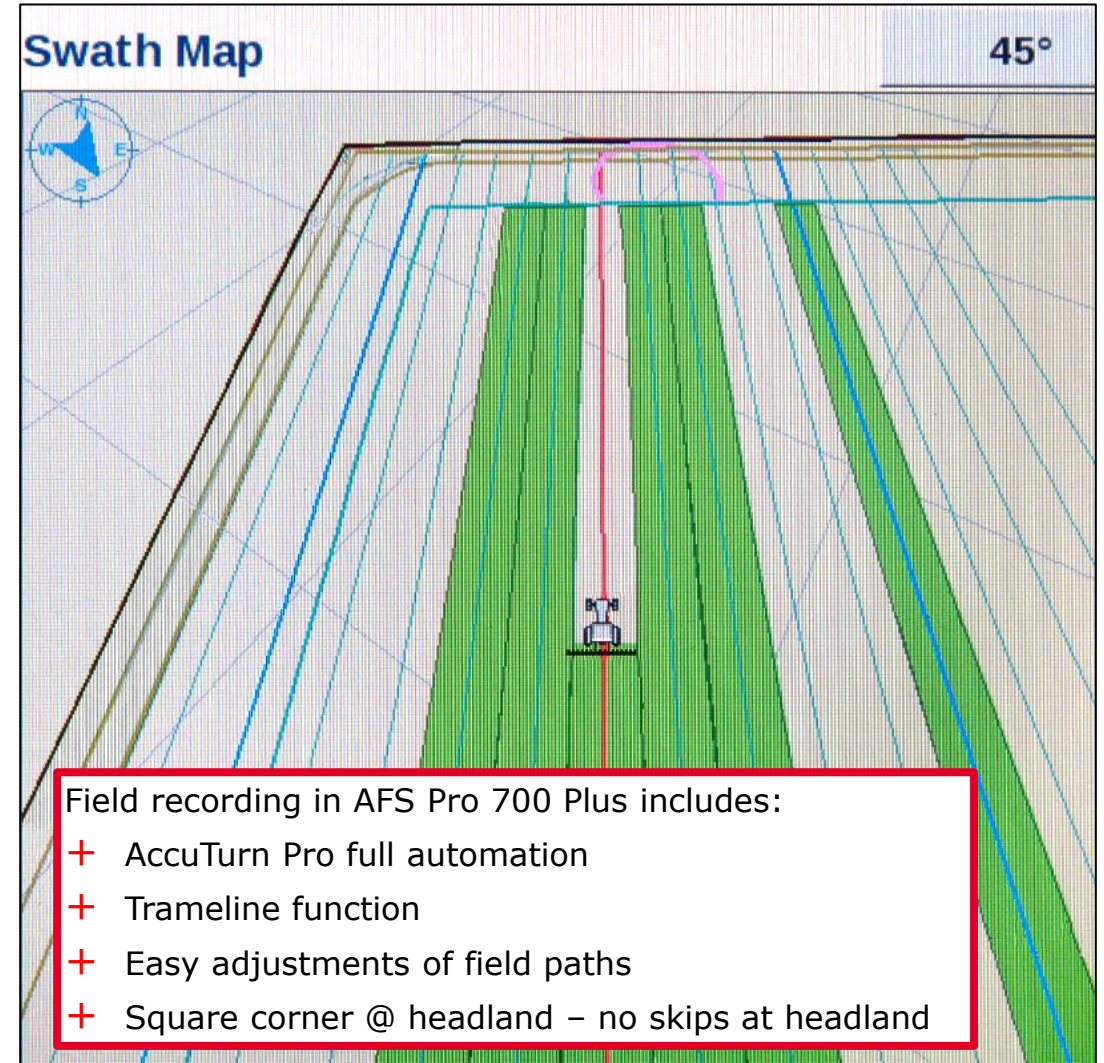
- All the wirings , antenna bracket and hydraulic orbitrol is installed

## AccuGuide complete:

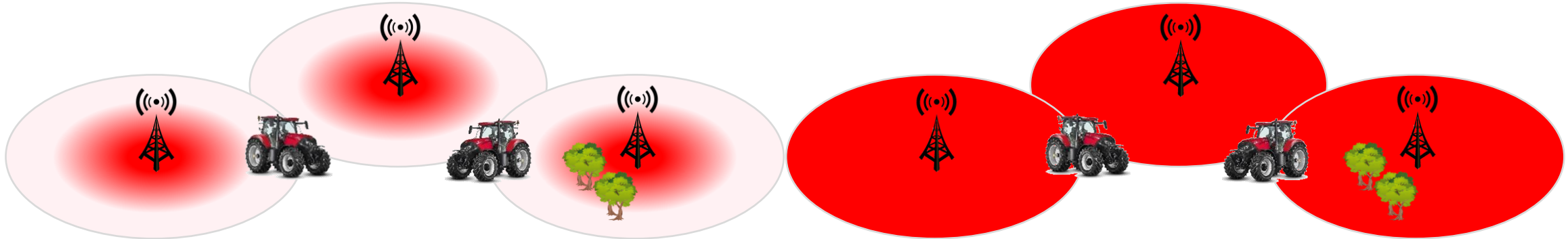
- All the wirings , antenna bracket and hydraulic orbitrol + NAV III Controller and antenna is installed. Accuracy depends on the order level.



Order options:			
759185	Autoguidance ready		
Complition package:			Accuracy
392722	-	Less Autoguidance	-
758803	Level 1	Egnos / RangePoint RTX ready	20 / 15
758804	Level 2	Centerpoint RTX ready	4
758871	Level 3	RTK+ Modem ready ZTN109992-11 GX 450 WiFi – Modemkit via Parts	1,5 +X-Fill

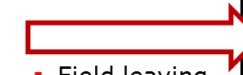
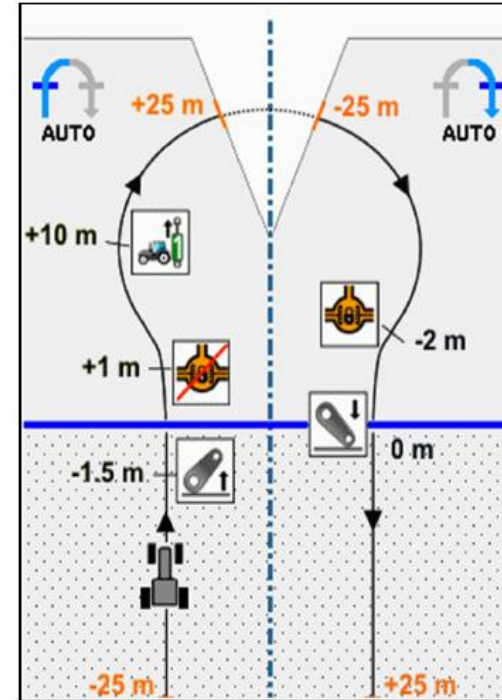


- **X-Fill:**
  - Signal losses will be bridged for up to 20 minutes as soon as the machine starts up.
  - Just keep going without interruption and maintain ultimate precision.
- **RTK+**
  - RTK+ is cellular-based guidance correction with 1,5 cm repeatable accuracy, using RTK base stations that are networked together.
  - RTK+ benefits include:
    - Seamless signal availability anywhere within network.
    - Consistent accuracy at any distance from the base.
    - Negates radio issues, such as line-of-sight interference.
- **Without RTK+ technology:**
  - Degraded or blocked signal.
- **Customer benefit RTK+ :**
  - Seamless signal availability anywhere within the network.

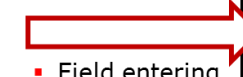


# AccuTurn Pro

- Faster performance, more efficient, hands-free automatic end of row turns with a **consistency** that is hard to match as well by experienced drivers
- **Proactive checking** rather than reactive fixes cause of full implement concentration from the operator
- Minimization in headland overlaps or skips ensures **substantial savings**
- 762174 Option Code for AccuTurn Pro



▪ **Field leaving**  
- before the boundary, in field  
+ along the curve  
range: [-25 + 25]



▪ **Field entering**  
- along the curve  
+ after the boundary, in field  
range: [-25 + 25]

1		m -3.0		1650 rpm
2		m 1.0		
3		% 30		
4				
5		m -1.0		
6		% 70		
7				
8		m 5.0		
9				

## What is it?

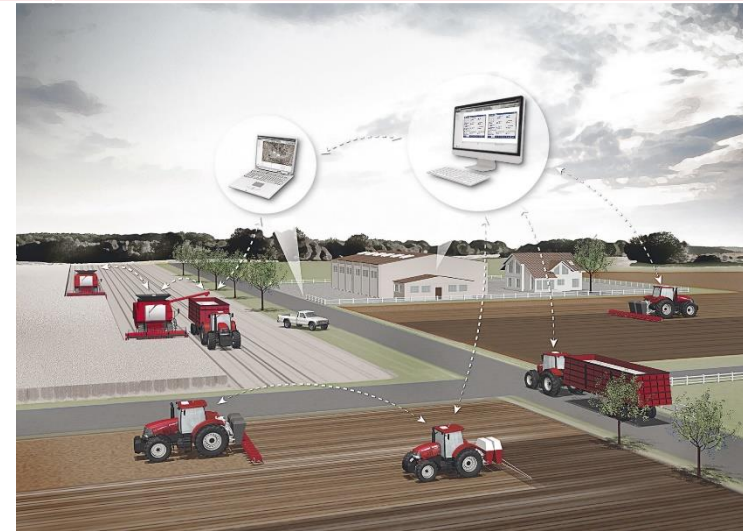
- Connecting producers with their farm and vehicle information - increase efficiency and effectiveness for today's farming business
- Optimize management decisions - information exchange across the entire farm

## How do I access it?

- Single sign on link in the dealer portal or at [My.CaseIH.com](http://My.CaseIH.com)
  
- Benefit of advanced Telematics is a wireless transfer of data between machines, computers and mobile devices (Smartphones, tablets,..)

## Options

391249	LESS TELEMATICS
763260	P&CM TELEMATICS 1Y SUBSCRIPTION
463261	P&CM TELEMATICS 3Y SUBSCRIPTION
763264	P&CM TELEMATICS 5Y SUBSCRIPTION
763262	P&CM ADVANCED TELEMATICS 1Y SUBS.
763263	P&CM ADVAN. TELEMATICS 3Y SUBS.
763265	P&CM ADVAN. TELEMATICS 5Y SUBS.



- The Virtual Terminal allows operators to control and change settings on an ISOBUS compatible implement through the tractors display.
- International Standard ISO 11783.
  - IsoBus Class 2 or IsoBus Class 3 (Additional to IsoBus Class 2 the implement is able to control the tractor).
- The standard was developed to reduce multiple implement specific terminals in the tractor cab for simplified usability.
- To control all the connected implements a AFS monitor is enough. Regardless of the type and manufacturer of the implement.
- IsoBus AUX-N function is standard within all IsoBus options.
- IsoBus in cab socket is standard within all IsoBus options.

Following levels are available:

**391185** Less IsoBus.

**PUMA:**

**758376:** IsoBus Class II

**PUMA MC:**

**758161:** IsoBus Class II

**759062:** IsoBus Class III (start/stop control). FPS only

**759347:** IsoBus Class III (speed, three-point linkage up/down, PTO on/off, remote valves, steering). FPS only

**PUMA CVXDrive:**

**758161:** IsoBus Class II

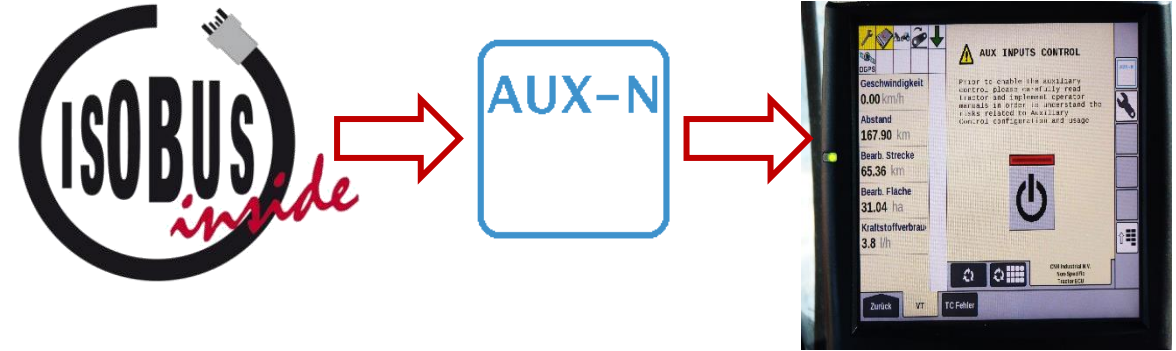
**758965:** IsoBus Class III (speed, three-point linkage up/down, PTO on/off, remote valves).

**759346:** IsoBus Class III (speed, three-point linkage up/down, PTO on/off, remote valves, steering).



## AUX-N

- Comfortable operation of IsoBus implements with known control elements
- If AUX-N is switched on, go to TOOLBOX → VT → AUX.



## ISOBUS Class 3

- The Tractor-Implement-Management-System (TIM) allows an implement to automatically control specific functions, such as the forward speed or the remote valves of a tractor
- By letting the implement optimize its operation the overall system can achieve higher levels of productivity with less operator fatigue

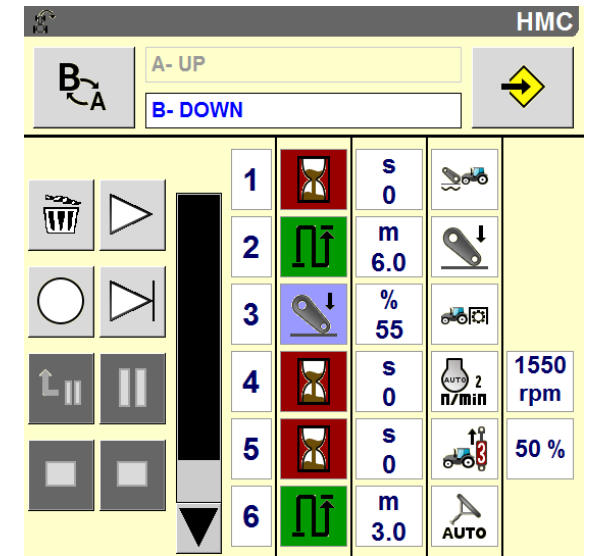
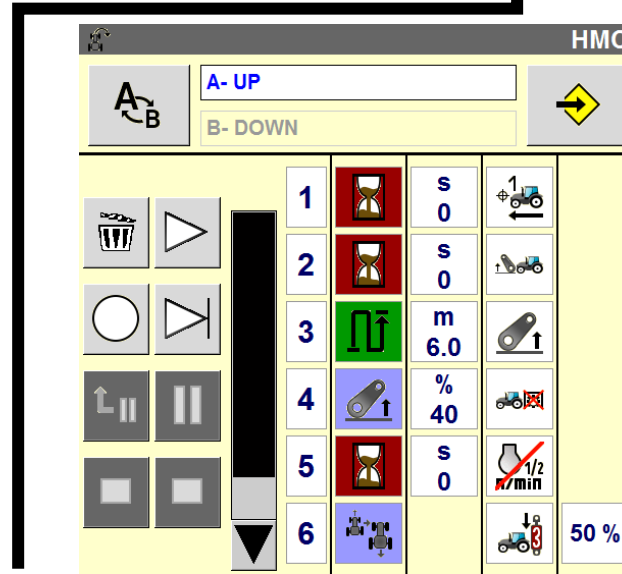
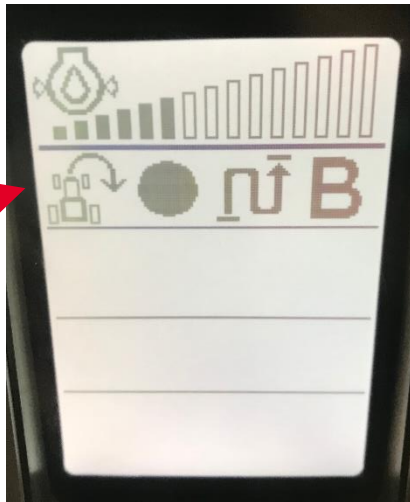
The screenshot shows the 'Aux. Controls' interface. On the left, a list of metrics is displayed: 'Distance 168.78 km', 'Dist In Work 66.24 km', 'Area Worked 31.45 ha', and 'Fuel Rate 3.8 l/h'. The main area contains a grid of control buttons. A callout box points to a yellow button labeled 'STOP', stating 'STOP = HMC button'. Another callout box points to a black button labeled 'Learn', stating 'If the „Learn“ button is pressed you just need to choose a function, this is getting orange and then press the dedicated button which should be used in example on the MC.' The 'Learn' button is highlighted in orange in the screenshot.

- Record, save and reuse working steps in a row, from raising your implement at the headland through to lowering it again
- A sequence of steps which can be triggered by the push of a button for any subsequent turning maneuvers
- HMC only available for MC and CVXDrive

Basic Case IH: 391349	Advanced Case IH: 758813
In A-post	Monitor required
Live recording	Manual & Live recording
Time or distance based	Time & distance based
-	GPS trigger for AccuTurn Pro
-	Sequence is saved per implement
-	Adjustments always possible
-	Special trigger available



Basic





# Functions to choose

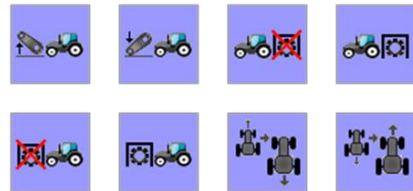
A trigger type is responsible WHEN a function in a sequence will be started. There are different types.

Triggers:

- Based on distance in meter
- Based on time in seconds
- Based on GPS position (automatic turn function)

Additional special triggers:

- Front/Rear Hitchposition
- Front/Rear PTO ON/OFF
- Shuttle
  - Not available @ transmission function



Symbol	Functions	Subfunction
	Engine speed	Minimum engine rpm
		CRPM 1 / CRPM OFF
		CRPM 2 / CRPM OFF
		Reversible fan
	Transmission	Target speed I,II,III
		Target speed without changing F1, F2 or F3
	Rear PTO	On / Off
		Release PTO brake
	Front PTO	On / Off
	Remote valves	Extend / retract
		Float mode
		Hydraulic engine operation
	Rear hitch	Fast drop
		Raise / lower
		Ride control
	Front hitch	Raise / lower
		Float
	PAUSE	Inbetween UP & DOWN
	Front axle suspension	Lock / Unlock
	4WD	On / Off
	Diff. Lock	On / Off
	Accuguide	On / Off
	Adaptive steering control	On / Off / Custom

# Maximum Weights and Payloads



## Technical Data

### Puma 150 – 175 CVX Drive Maximum Permissible Weight

Front Axle	4.900 kg	Total	11.500 kg
Rear Axle	8.500 kg.		

### Puma 150 – 165 Multicontroller Maximum Permissible Weight

Front Axle	4.900 kg	Total	10.500 kg
Rear Axle	7.800 kg.		

### Puma 140 – 165 Maximum Permissible Weight

Front Axle	4.900 kg	Total	10.500 kg
Rear Axle	7.800 kg.		

## Tractors Weighted Before Release

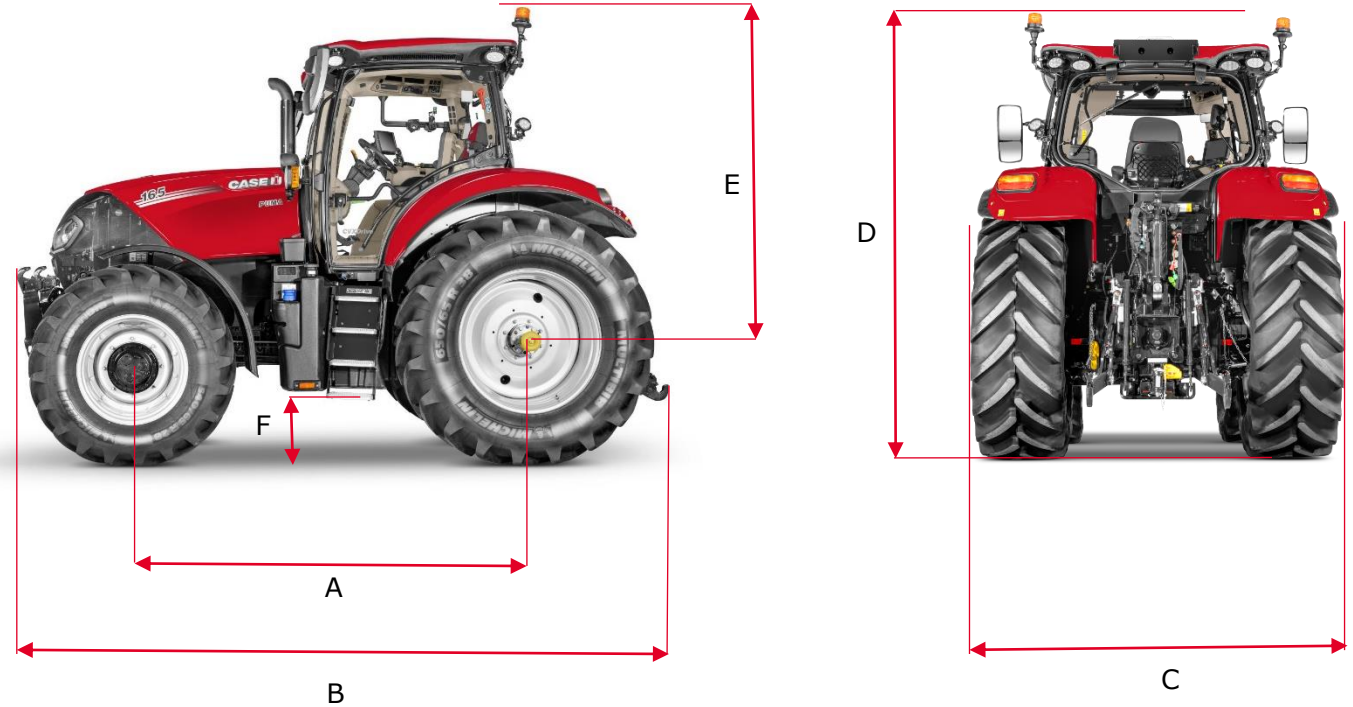
Front Axle Weight	Rear Axle Weight	Total Weight	Summary of Configuration
2.700	3.870	6.400 kg	Puma 140 (19 x 6 SPS) Tow hook & ballast carrier (front), 650/65R 38 rear tires
Payload			4.100 Kg.

Front Axle Weight	Rear Axle Weight	Total Weight	Summary of Configuration
		7.600 kg	Puma Multicontroller FHPL, slider frame + tow hitch, 650/75R 38
Payload			3.900 Kg.

Front Axle Weight	Rear Axle Weight	Total Weight	Summary of Configuration
		7.900 kg	Puma CVXDrive FHPL, FPTO, slider frame + tow hitch + K80, hydr. top link, 710/60R 42
Payload			3.600 Kg.

# Measurements

		Puma	150 - 175
A	Wheel Base standard / suspended		2.734 / 2.790 mm
B	Vehicle Length (FHPL lift arms and rear lift arms down) standard/suspended		5.240 / 5.316 mm
C	Min. Width Across Fenders (without extensions)		Narrow: 2.060 mm wide: 2.476 mm
D	Total Height (with tires 580/70R38)		3.026 mm
D	Total Height (with tires 650/65R42)		-
E	Height Center Rear Axle to Top of Roof		2.210 mm
F	Ground Clearance (to Lowest Point Cab Steps)		min: 216 mm max: 462 mm





[www.caseih.com](http://www.caseih.com)