

### **TRACTORES PUMA**

Following its strategy of offering a complete farming mechanization system, Case IH presents to the market its new line of medium power tractors from Puma family.

There are four new models of national manufacture, with nominal power between 144 and 182 hp and perfect relationship between weight and power, what allows an efficient and versatile work even in severe conditions and in the heaviest applications of planting or soil preparation.

The important point about the new line of Puma tractors is its versatility. The machines can work in soil preparation, planting, cultivation, spraying, miscellaneous tasks, always with the same efficiency and agility. This characteristic makes the line the best option for a farmer looking for a multipurpose tractor, which performs light and heavy tasks without compromising productivity.

Puma line offers models that can be equipped with electronic engine and Semi-Powershift transmission 18x6.

#### **AVAILABLE MODELS:**

- **Puma 140** = 144 hp rated power
- **Puma 155** = 157 hp rated power
- **Puma 170** = 167 hp rated power
- **Puma 185** = 182 hp rated power

### CAB ■ Larg

- Larger glass area
- Suspension with shock absorbers
- Lower noise level
- Multifunction lever with 85% of the commands

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End of line button

#### HYDRAULIC ······

- 4 remote valves
- 113 liters/minute
- 6,616 kg lifting capacity

#### TRANSMISSION

- Semi-Powershift
- Operational Ease
- 18x6





#### ····· APM

- Up to 24% of fuel savings
- Automatically selects the best gear for work
- Keeps hydraulic speed and flow constant

#### ····· AVAILABILITY

- Front axle improvements
- Quality items
- Seals on the engine sleeve
- Cabin cushion
- Tank vent

#### ENGINE

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- Approved MAR-I (Tier 3) (NEW)
- Case IH FPT 6.7 L
- Power Boost of up to 35 hp
- Extra power when needed

#### · · · · · CANE KIT

- Factory warranty
- Gauge of up to 3 meters
- Reversible gauges Complete solution

#### FRONT AXLE / TURNING CIRCLE

- Smallest in it's category
- 6.1 meters
- HD class 4 front axle (NEW)
- New differential
- New housing
- 4 planetary
- Hub vent





2 |

### **MAR-I ENGINE**

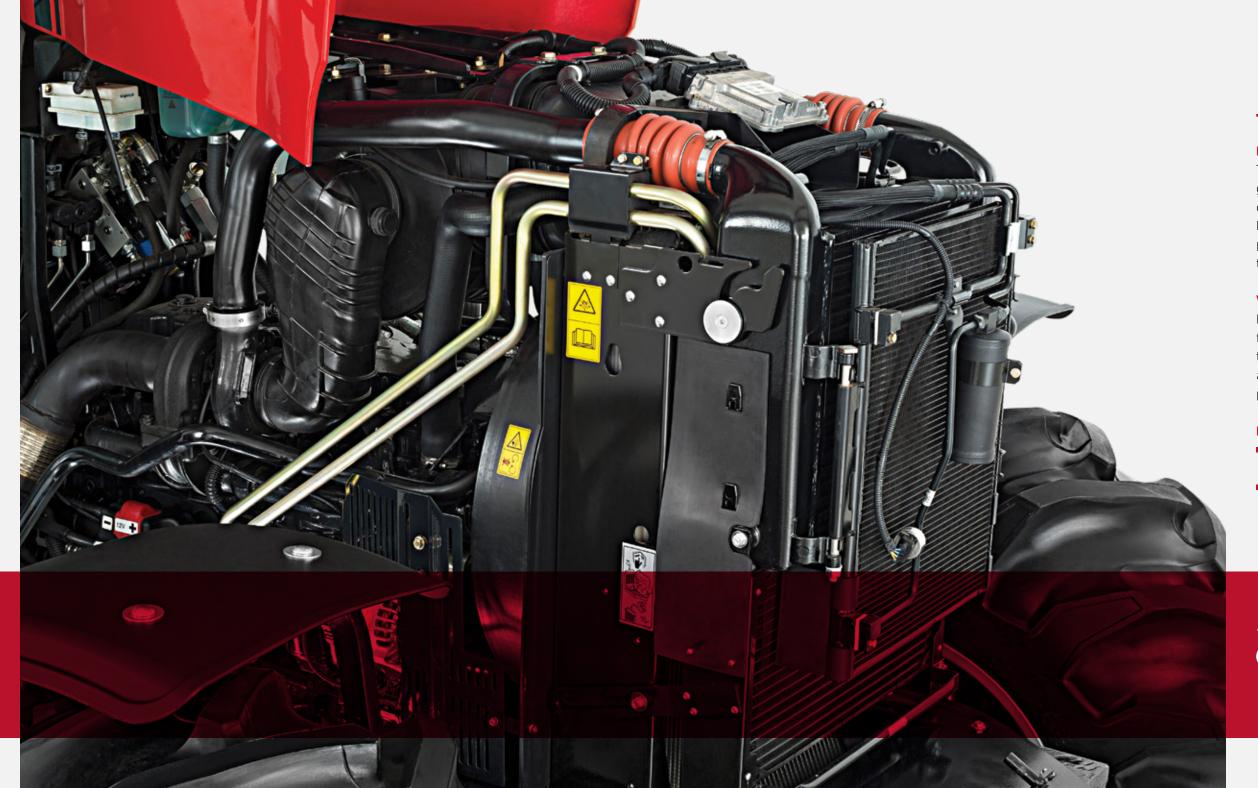
The machines are equipped with Case IH 6.75L engines, which have very modern cylinder heads with 4 valves per cylinder (2 intake and 2 exhaust valves), totaling 24 valves. This characteristic allows better circulation of intake and exhaust gases and, consequently, makes more power and high torque available.

Besides electronic injection and multi-valve cylinder heads, the electronic engines in the Puma line are equipped with the proven and modern Common Rail injection system. This feature consists of a pressurization system that causes the fuel to reach high pressures in the combustion chamber and be better burned. With this, its energy is better utilized, which allows for greater power with reduced fuel consumption.

With electronic engines, the line also has Power Boost as standard, a system that allows the engine an automatic power increase that can reach 35 hp, used to overcome heavy demands during work.



New Tier 3 emission level engines (MAR-I), with iEGR system (with internal gas recirculation).



### **MOTORIZATION**

#### **ENGINE COOLING SYSTEM**

This system that equips the Puma tractors guarantees adequate engine cooling under severe operating conditions. It can be said that the cooling box with three main radiators requires less fan power, allowing the engine to devote more power to the operations performed.

#### VISTRONIC TECHNOLOGY

In this system that equips the Puma line, the fan speed adjusts itself electronically based on temperature sensors, causing the fan to only rotate at the necessary speed, thus consuming the proper power.

#### **FUEL TANK**

- High fuel tank capacity long working periods before refueling.
- Capacity (all): 395 liters.



# TRANSMISSION SEMI-POWERSHIFT

Equipped with the Semi-Powershift transmission, the Puma tractors have 18 forward and 6 reverse speeds, 3 electrically driven mechanical ranges (with clutch shift), and 6 Powershift speeds (clutchless shift).

In the Semi-Powershift transmission, the electro-hydraulic shifter located on the left side of the steering wheel column changes the forward/reverse direction of travel without using the clutch pedal. Complementing this advantage, the tractor's electronic system allows the operator to logically and automatically program the transmission between distinct forward and reverse speeds.

- High flow for the category with 113 L/min
- Hydraulic valves with flow control
- Four hydraulic valves
- Hydraulic return valve with drain
- Flow and pressure compensated PFC pump



### "APM DIESEL SAVER"

The "APM Diesel Saver" is an advanced system that equips the Puma line with Semi-Powershift transmission, which makes it possible to reduce fuel consumption in certain conditions.

- With APM "Field" mode active in soil or slope conditions where higher torque is required, the tractor automatically reduces the gear, thus overcoming that obstacle, and automatically returns to the working gear, making the operation easier and increasing the yield.
- In transport operations, activating the APM "Road" mode, the gears are automatically selected according to the engine rpm and the driven loads, thus maintaining the ideal ratio for that operation.

7

### **HYDRAULIC SYSTEM**

A well-established hydraulic system that aims to meet the highest demand for hydraulic flow is available for the Puma line.

This system has technology that allows better response to commands and more precise flow control.

#### **TURNING RADIUS**

The Puma tractors have a small turning radius, reaching 6.10 m, which gives these tractors excellent maneuverability.

#### HYDRAULIC LIFT SYSTEM

The Puma tractors have a high capacity lifting system, 6,616 kgf, thus ensuring high yield and maximum productivity with the most modern implements.

#### FRONT AXLE

HD class IV front axle with electrohydraulic lock.

- New reinforced housing
- New differential
- Hub vent
- Final reduction with 4 planetary gears











#### **REAR AXLE**

The rear axle has pressurized lubrication, which ensures maximum lubrication for the axle/transmission assembly even during long workdays.

- Broad gauge adjustment possibilities.
- Adjustments: 1,528 to 2,698 mm.
- Standard rear axle size: 112" long.
- Differential with multi-disc lock.
- Final reductions with 3 planetary gears.
- Hydraulically actuated disc brakes.

#### **CANE KIT**

Advantages of the original factory Case IH cane kit:

- Provides the use of the correct gauge, avoiding the compaction of the cane stubbles;
- It comes already assembled from the factory and needs no disassembly or adaptation;
- Single axle for the two sizes of gauge, greater economy for the customer;
- Extended axle tested and approved by Case IH;
- Full factory warranty, according to the equipment's current warranty;
- Pneumatic brake synchronized with the tractor's service brake, with no need for an extra command.



9

### "SURVEYOR" CAB

The Puma's cab stands out for being a reference in comfort and space. In addition, its glazed area of 5.87 m2 allows for superior visibility in any working condition.

The front supports are mounted vertically, and the cab is supported by sets of adjustable shock absorbers and springs, making the machine one of the most comfortable in the segment, without excessive vibrations and with a low noise index (reaching 69 dB), which ensures high productivity without increasing the stress and fatigue of the operator.

In addition, the machines of the new Puma line have a high-tech multifunctional armrest, with easy access and total control of the tractor's various tools and resources.

The multifunction lever is designed to fit perfectly

+COMFORT HIGHER PRODUCTIVITY



in the operator's right hand, giving him total comfort in operating the tractor and access to the main operating functions at his fingertips.

The operator's seat is ultra-comfortable and provides the best possible ergonomics and working position. The models also have an additional seat for instruction, allowing two people to sit safely and comfortably inside the cab.





### **OPERATIONAL EASE**

#### **END-OF-LINE OPERATIONS MANAGEMENT**

O sistema eletrônico dos tratores Puma ermite ao operador gravar determinadas ações realizadas durante o início e o fim de uma linha de preparo de solo, plantio ou outra operação necessária. Actions such as raising or lowering the engine speed, switching the front-wheel drive or differential lock on or off, raising or lowering the implement when engaged in hydraulic lifts, can all be recorded. With just one touch of the button, the tractor will perform the operations at the recorded times. Case IH Technology.

#### **QUICK AND EASY MAINTENANCE**

The design of the Puma was developed to allow quick and fast daily maintenance. The large hood is supported by strong gas shock absorbers and can be opened completely, making access easy and avoiding the removal of the side bulkheads, which makes daily checks possible.

## SERVICEABILITY EASIER MAINTENANCE

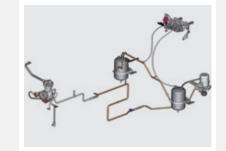


#### SPECIAL CONFIGURATIONS TO USE IN SUGAR CANE

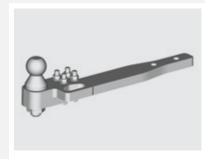
The new Puma models are specially designed for the sugarcane sector. In these models, some items are available:

- AFS Guide autopilot predisposition.
- Reinforced front axle of Class IV category with gauge of up to 3 meters, ideal for applications in sugarcane farming, avoiding the stepping and the compacting of the stubble. The version features a single axle for different applications/gauges, without the need to purchase an additional axle, with technology tested by Case IH and full factory warranty.
- Pneumatic brakes for application with overflows and pin-ball connections.





Pneumatic brake kit



Drawbar with ball pin coupling.

### **AFS SYSTEM**

#### AFS GUIDE - THE PRECISION FARMING SOLUTION FROM CASE IH

The new Puma line has models with predisposition for AFS Guide autopilot. In these AFS-equipped models, the farmer can download tractor data such as fuel consumption and operational performance data to his computer, thus being able to prepare management reports and make his operations profitable.

The AFS Guide hydraulic autopilot system automatically steers the Puma, using the most accurate, compatible, and reliable GPS signal correction systems.





#### **AFS PRO 700 MONITOR**

Here are some of the features:

- Touch screen and intuitive interface.
- The screen size is one of the largest among the competition.
- Portable for use in other equipment.
- It allows the operator to monitor specific tractor functions, such as distance traveled and fuel consumption.



#### **NEW RECEIVER AFS 392**

- Improves the performance of the autopilot assembly.
- All satellite constellations available: GPS, Glonass, Galileo, Beidou and QZSS.









#### **IMPROVED PERFORMANCE**

- Profitability.
- Availability.
- Best response under flickering.
- Repeatability.



#### **USER-FRIENDLY**

- Extensive coverage.
- Repeatability without limits.
- Accuracy 2.5 cm.
- Compatibility.

#### CORRECTION SIGNALS

- Range Point
- RTX Center Point.
- RTK Trimble.
- RTK+ (NTRIP).

#### **PRO-POINT TECHNOLOGY**

RTX Center Point Signal performance:

- 25% more satellites used for positioning.
- 40% more signal stability time with autopilot engaged.
- 75% faster convergence. Less than 5 minutes.



## **SPECIFICATIONS**

MODEL	Puma 140	Puma 155	Puma 170	Puma 185		
	ENGINE					
Brand		Case IH				
Number of cylinders / type		6/Turbo with intercooler				
Capacity		6,7 litros				
Rated power	144 cv	157 cv	167 cv	182 cv		
Maximum power	152 cv	168 cv	174 cv	195 cv		
Maximum power with boost	177 cv	193 cv	201 cv	209 cv		
Rated engine speed		2.200 rpm				
Maximum torque (Nm)	643	690	710	760		
Maximum torque with boost (Nm)	678	748	778	800		
Torque reserve	42%	37%	35%	35%		
Fuel tank		395 liters				
	TRANSMISSIO	N				
Transmission type		Semi-Powershift 18x6				
Rear differential lock		Electro-hydraulic drive				
Service brake		Multi-disc oil-bath, self-adjusting				
	FRONT-WHEEL D	RIVE				
Туре		Accionamiento electro-hidráulico				
Electro-hydraulic drive		55°				
Steering angle		6,1 m				
	POWER TAKE-0	)FF				
Туре		Electro-hydraulic drive				
Speeds		540/750/1.000 rpm				
Engine's rpm		2,200 rpm				
Shaft type		1 3/8" 21 grooves	1 3/8" 6 grooves			
	HYDRAULIC SYS	TEM				
Main hydraulic system flow	113 L/min STD (or 150 L/min optional)	113 L/min STD (o 150 L/min)	150 L/min	150 L/min		
System pressure		215 bar				
Pump type		PFC – Closed Center				
Maximum lifting capacity of 610 mm		6.616 kg				
Category Type		WIII				
Number of remote control valves	3 STD o 4 Opcional	3 STD o 4 Opcional	4	4		

MODEL	Puma 140	Puma 155	Puma 170	Puma 185			
	WEIGHT						
Minimum weight		6.725 kg					
Total allowable weight		10.500 kg					
Maximum allowable front weight		4.200 kg					
Maximum allowable rear weight		6.300 kg					
	DIMENSIONS	;					
Total length		4.916 mm					
Total height		3.100 mm					
Total width		2.334 mm					
Front gauge adjustment		1.560/2.258 mm o 2.800 / 3.000 mm					
Rear gauge adjustment		1.528/2.698 mm o 2.800 / 3.000 mm					
	TIRE OPTIONS	;					
Option 1 Front 16.9-28R1 - 10PR - Bias and Rear 24.5-32R1 - 12PR - Bias	Available	Available	Not available	Not available			
Option 2 Front 18.4-26R1 - 12PR - Bias and Rear 24.5-32R1 - 12PR - Bias	Not available	Not available	Available	Available			
Option 3 Front 16.9-28R1 – 10PR – Bias and Rear 20.8-38R1 – 10PR DUAL – Bias	Available	Available	Not available	Not available			
Option 4 Front 18.4-26R1 - 12PR - Bias and Rear 20.8-38R1 - 10PR DUAL - Bias	Not available	Not available	Available	Available			
Option 5 Front 600/55R30.5 A8 – TRELLEBORG and Rear 710/65 R38 A8 – TRELLEBORG	Available	Available	Available	Available			
Option 6 Front 540/65 R28 R1W A8 and Rear 650/75 R32 R1W A8	Available	Available	Available	Available			
Option 7 Front 14.9-28R2 - 8PR - Bias and Rear 23.1-34R2 - 8PR - Bias	Not available	Not available	Available	Available			
Option 8 Front 18.4-26R2 – 10PR – Bias and Rear 20.8-38R2 – 10PR DUAL – Bias	Available	Available	Available	Available			

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Customer care center.

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