CEAM023702

Operation & Maintenance Manual

430FX-1
430FXL-1
445FXL-1

CRAWLER FELLER BUNCHERS/HARVESTERS

SERIAL NUMBER	430FX-1	A10001-UP
	430FXL-1	A10001-UP
	445FXL-1	A10001-UP
ENGINE	QSC 8.3 TIER 3	

June 2011

KOMATSU®

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Travel Controls

⚠ WARNING

- **You must read and understand all safety messages and instructions in Section 1 of this manual before beginning operating procedures.**
- **The cab door must be closed and secured before beginning any operations. If the door is not fully closed, the safety interlock system will lock out all hydraulic controls.**
- **Operate the travel controls gradually and smoothly. Excessive speed and quick control movements are hazardous and could cause an accident.**

⚠ WARNING

- **The travel direction of the machine is with the track drive sprockets toward the rear of the machine when you are looking out the front window.**
- **Do not travel at high speed for more than 30 minutes. When traveling at high speed for a long period of time, overheating of the final drives could result. Stop the machine at regular intervals and allow the drives to cool.**

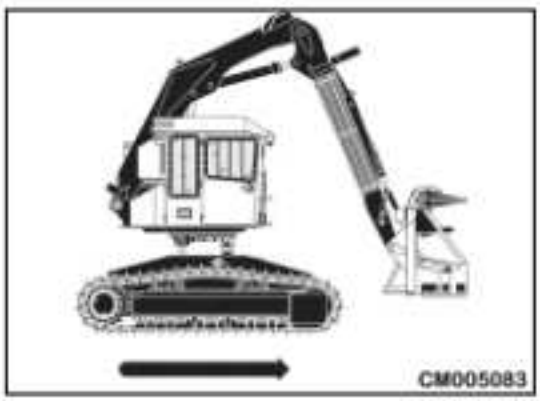
Forward Travel

To travel forward, push down on the top of both travel pedals with your toes (1). The farther the pedals are pressed downwards, the faster the machine will travel.

To stop traveling, release the pedals and they will return to the neutral position stopping machine movement.

Check that the travel alarm sounds properly.





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Lubrication

Use a good quality grease containing at least 5 - 6% Molybdenum at all lubrication points. Komatsu recommends Mobil grease XHP 322 Mine. Grease meeting the above requirement has a higher rated load pressure than a typical multi-purpose EP grease.

Add grease at the following points until it appears at the pivot area.

Boom and Cylinder Pivots

1. On the underside of the stick there is a group of remote grease fittings (1) for the following lubrication points:

- Main boom cylinder rod end pivot.
- Stick cylinder base end pivot.
- Stick cylinder rod end pivot.
- Boom pivot (2 fittings).
- Tool tilt cylinder base end pivot (2 fittings).

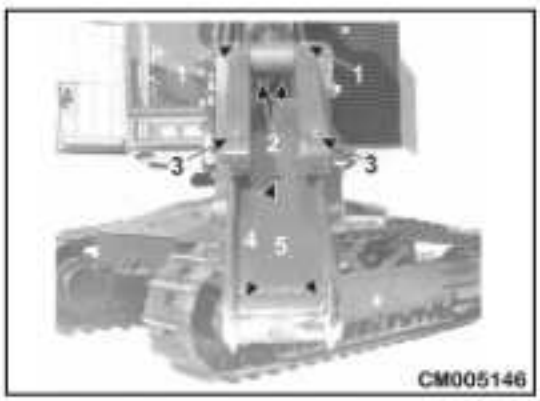


2. The main boom lubrication points are located at the base end of the boom, accessed from the rear of the machine. Two Main Boom Cylinder base end pivot lubrication points (1) are located on the inside of the boom base weldment. The Main Boom Pivot lubrication is done through two grease points (2) underneath the base of the boom.



3. Located at the front end of the stick assembly are several lubrication points, referred to as the 4-Bar Link Assembly.

- Lube Point 1 - Rod end of Tool Tilt Link, both sides of rod end pivot.
- Lube Point 2 - Tool Tilt Rod End pivot.
- Lube Point 3 - Attachment Pivot end of Tool Tilt link.
- Lube Point 4 - Central "Dog Bone" link pivot.
- Lube Point 5 - Cutting attachment pivot



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Engine	
Model	Cummins QSC8.3 Tier 3
HP	300 HP @ 2000 rpm
Torque	1000 lbf ft @ 1500 rpm
Fuel capacity 430FX 430FXL	 225 gal / 852 ℓ 185 gal / 700 ℓ
Machine Weight (without attachment)	
FX Base machine	60154 lb / 27,285 kg
FXL Base machine	Narrow (Std.) Wide (Opt) 60,903 lb / 27,625 kg 61,873 lb / 28,065 kg
Remark - Approximate "woods ready" operating weight, fully serviced including 1/2 tank fuel and 176 lb (80 kg) operator.)	
Cab Leveling FXL	
Front	27° Tilt 51% Slope
Rear	5° Tilt 9% Slope
Side	20° Tilt 38% Slope
Cutting Area (Std. length boom, to attachment)	
Maximum	21 ft 5 in / 6530 mm
Minimum	7 ft 6 in / 2290 mm
Swath	13 ft 11 in / 4240 mm
Lifting Capacity (without attachment)	
@ 10 ft (3.05 m)	24,250 lb / 11,000 kg
@15 ft (4.57 m)	18,200 lb / 8,255 kg
@ 20 ft (6.10 m)	11,500 lb / 5,216 kg
Track System Heavy duty forest undercarriage include Komatsu 8.5 in pitch size with 600 mm (24 in) single grouser shoes, sealed and lubricated chain assembly, high reliability final drive and 2-speed auto-shift track motors.	
Traction effort	61,775 lb / 29,010 kg
Effort to weight ratio 430FX 430FXL	 1.01:1 1.03:1
Speed	0 - 3.0 mph / 0 - 4.8 km/h
Hydraulic Implement circuit feature digital control system and 9-section main control valve. Each track drive features its own closed loop hydrostatic circuit and separate 55 gal/min. (208 ℓ/min.) pump. Independent horsepower control for track drive and implement systems. 95 gallon hydraulic oil reservoir.	
Swing Swing Torque	 47,100 lbf ft / 63,730 N•m

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Hydraulic Tank Removal

Remark

Tag and mark all of the hydraulic hoses, wire connectors, and fittings before removal to ensure correct installation. Cap and plug all the fittings and hoses after removal to prevent contaminants from entering the hydraulic system.

1. If equipped with a vacuum pump, remove the pump cover from the top of the tank.
2. Remove the hydraulic filter cover from the top of the tank.
3. Remove all the hoses and fittings from the hydraulic filters on top of the tank.

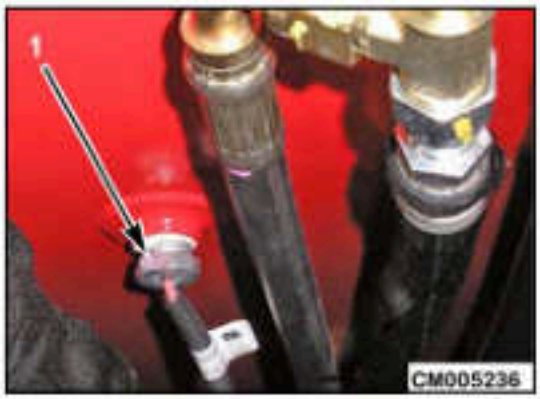




4. Disconnect the oil level sensor connector (1) from the back of the tank.

Remark

Follow the wires down to the connector.

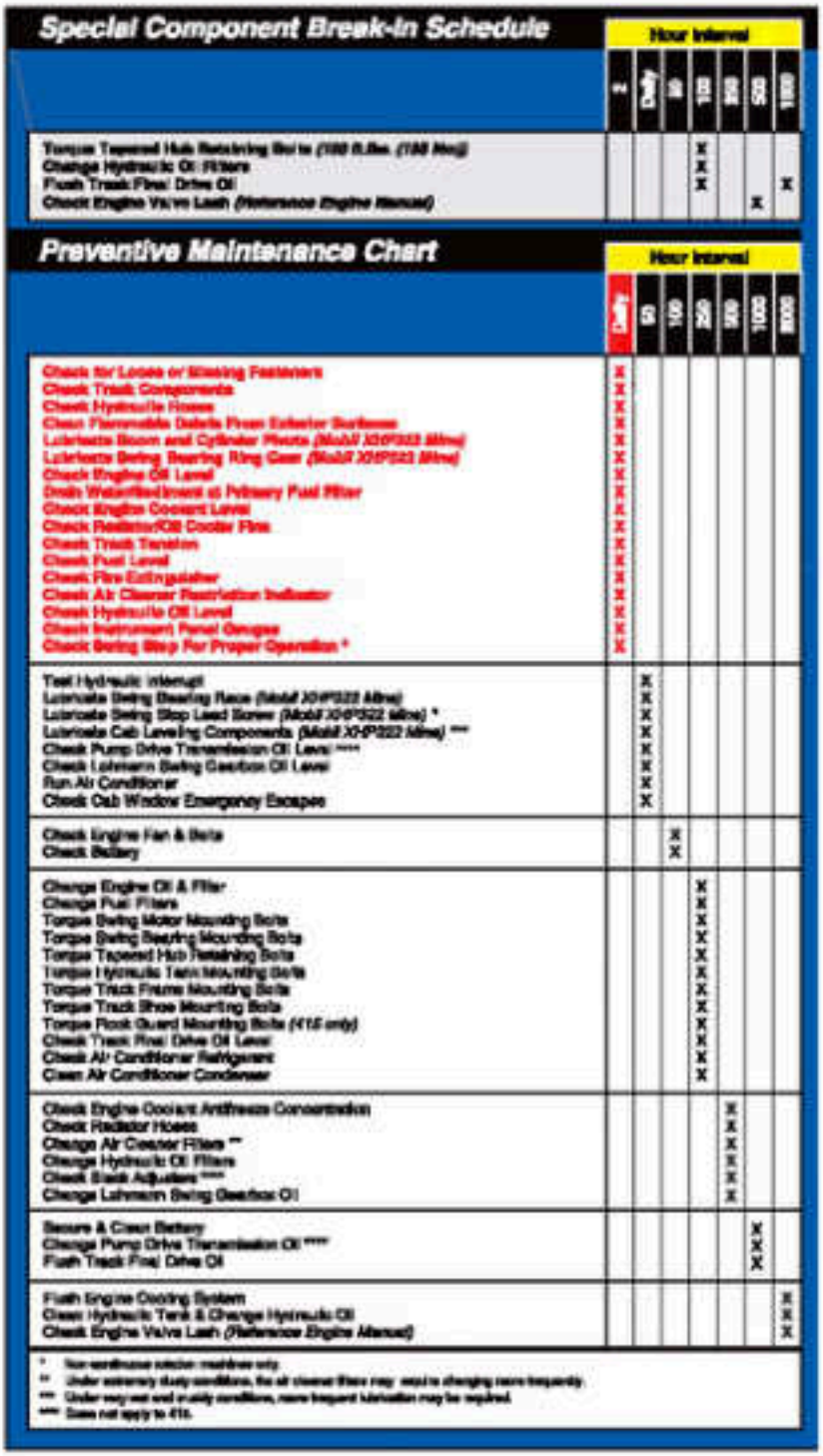


5. Remove all the hydraulic hoses from the bottom of the tank. The fittings are easier to remove after the tank is removed from the machine.



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Example: One half of laminated card for Preventive Maintenance and Lubrication.



Special Component Break-In Schedule

	Hour Interval						
	1	Daily	50	100	250	500	1000
Torque Tapered Hub Retaining Bolts (100 ft.lbs. (135 Nm))				X			
Change Hydraulic Oil Filters				X			
Flush Track Final Drive Oil				X			
Check Engine Valve Lash (Reference Engine Manual)						X	X

Preventive Maintenance Chart

	Hour Interval						
	Daily	50	100	250	500	1000	2000
Check for Loose or Missing Fasteners	X						
Check Track Components	X						
Check Hydraulic Hoses	X						
Clean Flammable Debris From Exterior Surfaces	X						
Lubricate Boom and Cylinder Pivots (Mobil XHP222 Mine)	X						
Lubricate Swing Bearing Ring Gear (Mobil XHP222 Mine)	X						
Check Engine Oil Level	X						
Drain Water/Sediment at Primary Fuel Filter	X						
Check Engine Coolant Level	X						
Check Radiator/Oil Cooler Fins	X						
Check Track Tension	X						
Check Fuel Level	X						
Check Fire Extinguisher	X						
Check Air Cleaner Restriction Indicator	X						
Check Hydraulic Oil Level	X						
Check Instrument Panel Gauges	X						
Check Swing Stop For Proper Operation *	X						
Test Hydraulic Interrupt		X					
Lubricate Swing Bearing Race (Mobil XHP222 Mine)		X					
Lubricate Swing Stop Lead Screw (Mobil XHP222 Mine) *		X					
Lubricate Cab Leveling Components (Mobil XHP222 Mine) ***		X					
Check Pump Drive Transmission Oil Level ****		X					
Check Lohmann Swing Gearbox Oil Level		X					
Run Air Conditioner		X					
Check Cab Window Emergency Escapes		X					
Check Engine Fan & Belts			X				
Check Battery			X				
Change Engine Oil & Filter				X			
Change Fuel Filters				X			
Torque Swing Motor Mounting Bolts				X			
Torque Swing Bearing Mounting Bolts				X			
Torque Tapered Hub Retaining Bolts				X			
Torque Hydraulic Tank Mounting Bolts				X			
Torque Track Frame Mounting Bolts				X			
Torque Track Shoe Mounting Bolts				X			
Torque Front Guard Mounting Bolts (416 only)				X			
Check Track Final Drive Oil Level				X			
Check Air Conditioner Refrigerant				X			
Clean Air Conditioner Condenser				X			
Check Engine Coolant Antifreeze Concentration					X		
Check Radiator Hoses					X		
Change Air Cleaner Filters **					X		
Change Hydraulic Oil Filters					X		
Check Track Adjusters ****					X		
Change Lohmann Swing Gearbox Oil					X		
Secure & Clean Battery						X	
Change Pump Drive Transmission Oil ****						X	
Flush Track Final Drive Oil						X	
Flush Engine Cooling System							X
Clean Hydraulic Tank & Change Hydraulic Oil							X
Check Engine Valve Lash (Reference Engine Manual)							X

* Non-warehouse selection machines only.

** Under extremely dusty conditions, the air cleaner filters may need to changing more frequently.

*** Under very wet and muddy conditions, more frequent lubrication may be required.

**** Does not apply to 416.

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