

RT115Q

Operator's Manual










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	Drill procedures for drilling	109
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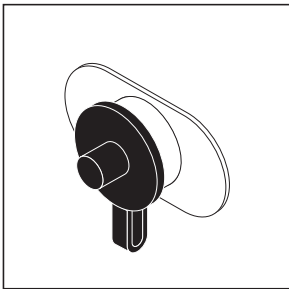
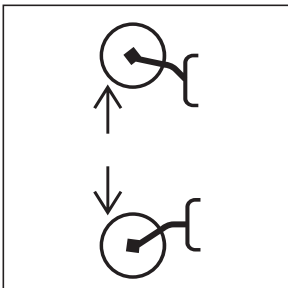
If a Fiber Optic Cable is Damaged

Do not look into cut ends of fiber optic or unidentified cable. Vision damage can occur.

If Machine Catches on Fire

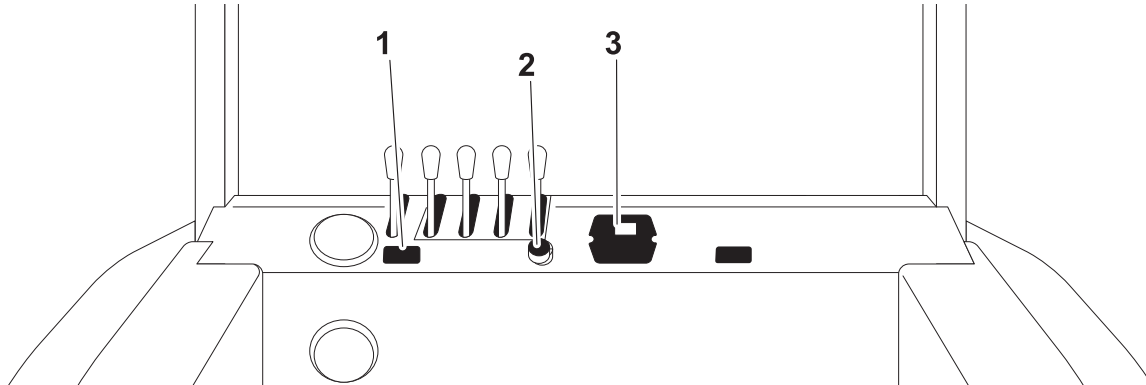
Perform emergency shutdown procedure and then take the following actions. The order and degree of action will depend on the situation.

- Immediately move battery disconnect switch (if equipped and accessible) to disconnect position.
- If fire is small and fire extinguisher is available, attempt to extinguish fire.
- If fire cannot be extinguished, leave area as quickly as possible and contact emergency personnel.

Item	Description	Notes
<p>7. Auxiliary outlet</p>  <p>c00ic179h.eps</p>	<p>Provides power for other equipment.</p>	<p>Power output is 12V, 5A.</p>
<p>8. Reel carrier control</p>  <p>c00ic205h.eps</p>	<p>To raise, press top. To lower, press bottom.</p>	<p>Optional.</p>

Rear Console

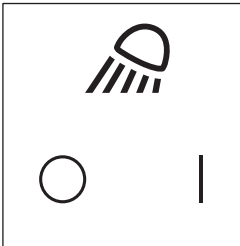
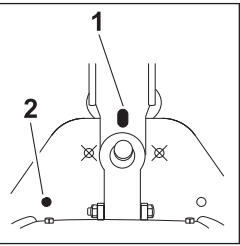
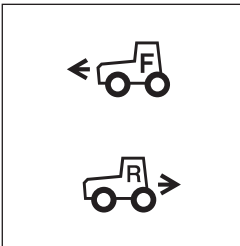

Optional Controls



t30om091h.eps

- | | |
|---|---|
| <ol style="list-style-type: none"> 1. Cruise control selector 2. Cruise control RPM control | <ol style="list-style-type: none"> 3. Trench Depth Meter |
|---|---|

Item	Description	Notes
<p>1. Cruise control selector</p> <div style="border: 1px solid black; padding: 5px; text-align: center;"> <p>CRUISE CONTROL MANUAL AUTO.</p> </div> <p><small>c00ic186h.eps</small></p>	<p>To turn on, press once.</p> <p>To turn off, press again.</p>	<p>Turn on cruise control only when:</p> <ul style="list-style-type: none"> ground drive motor control is in 1 / low ground drive is in neutral <p>For more information about cruise control, see page 118.</p>
<p>2. Cruise control RPM control</p> <div style="border: 1px solid black; padding: 5px; text-align: center;"> <p>R.P.M.</p> </div> <p><small>c00ic187h.eps</small></p>	<p>To increase engine speed while using cruise control, turn clockwise.</p> <p>To decrease engine speed while using cruise control, turn counterclockwise.</p>	<p>This typically decreases ground drive speed temporarily.</p> <p>This typically increases ground drive speed temporarily.</p> <p>For more information about cruise control, see page 118.</p>

Item	Description	Notes
<p>6. Work light switch</p>  <p><small>c00ic086c.eps</small></p>	<p>To turn on, press right.</p> <p>To turn off, press left.</p>	
<p>7. Swing lock pin</p>  <p><small>c00ic234h.eps</small></p>	<p>To lock:</p> <ul style="list-style-type: none"> Engage stow lock. Insert swing lock pin into hole (1). <p>To release:</p> <ul style="list-style-type: none"> Remove pin and store in hole (2). Release stow lock. 	<p>This pin locks boom from swinging during transport.</p> <p>NOTICE: Do not store pin in holes marked with an "X." Backhoe could swing and destroy pin.</p>
<p>8. Remote ground drive control</p>  <p><small>c00ic216h.eps</small></p>	<p>To move tractor forward, push.</p> <p>To move tractor backward, pull.</p>	<p>NOTICE:</p> <ul style="list-style-type: none"> This control is disabled if tractor seat is occupied. Ensure that backfill blade, if equipped, and stabilizers are raised before operating this control. Do not move more than 30' (10 m) at a time.
<p>9. Remote engine stop switch</p>  <p><small>c00ic085c.eps</small></p>	<p>Stops engine immediately.</p>	<p>For normal engine shutdown, use ignition switch.</p>

Classify Jobsite

Inspect Jobsite

- Follow U.S. Department of Labor regulations on excavating and trenching (Part 1926, Subpart P) and other similar regulations.
- Contact your local One-Call (811 in USA) or the One-Call referral number (888-258-0808 in USA and Canada) to have underground utilities located before digging. Also contact any utilities that do not participate in the One-Call service.
- Inspect jobsite and perimeter for evidence of underground hazards, such as:
 - “buried utility” notices
 - utility facilities without overhead lines
 - gas or water meters
 - junction boxes
 - drop boxes
 - light poles
 - manhole covers
 - sunken ground
- Have an experienced locating equipment operator sweep area within 20' (6 m) to each side of trench path. Verify previously marked line and cable locations.
- Mark location of all buried utilities and obstructions.
- Classify jobsite.

Select a Classification

Jobsites are classified according to underground hazards present.

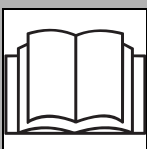
If working . . .	then classify jobsite as . . .
within 10' (3 m) of a buried electric line	electric
within 10' (3 m) of a natural gas line	natural gas
in sand, granite, or concrete which is capable of producing crystalline silica (quartz) dust	crystalline silica (quartz) dust
within 10' (3 m) of any other hazard	other

NOTICE: If you have any doubt about jobsite classification, or if jobsite might contain unmarked hazards, take steps outlined previously to identify hazards and classify jobsite before working.

Lift



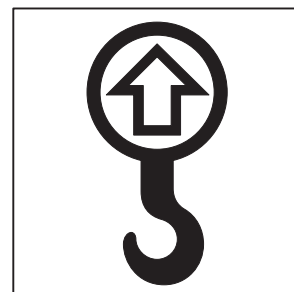
WARNING Crushing weight. If load falls or moves it could kill or crush you. Use proper procedures and equipment or stay away.



WARNING Incorrect procedures could result in death, injury, or property damage. Learn to use equipment correctly.

Points

Lifting points are identified by lifting decals. Lifting at other points is unsafe and can damage machinery.



ic1319a.eps

Procedure

Tractor

This machine is not configured for lifting. If the machine must be lifted, load machine into a container or onto a platform appropriate for lifting. See "Specifications" on page 179 for size and weight of machine.

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Setup

EMERGENCY SHUTDOWN - Turn ignition switch to STOP.



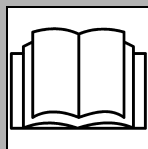
WARNING Crushing weight could cause death or serious injury. Use proper procedures and equipment or stay away.

To help avoid injury: Keep everyone at least 6' (2 m) from machine, attachments, and their range of movement.



WARNING Jobsite hazards could cause death or serious injury. Use correct equipment and work methods. Use and maintain proper safety equipment.

To help avoid injury: Comply with all utility notification regulations before digging or drilling.



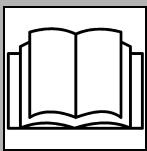
WARNING Incorrect procedures can result in death, injury, or property damage. Learn to use equipment correctly.

To help avoid injury: Use attachments or counterweights to make front and rear loads balance when all attachments are raised. Contact your Ditch Witch dealer about counterweighting for your equipment.

NOTICE:

- Do not operate vibrator unless plow is in the ground.
- The RT115Q is programmed to operate with the original attachment (trencher or plow) configuration. If you change attachments, contact your Ditch Witch dealer to make sure the electronic programming is updated. If you change attachments without updating the electronic programming, your attachment may not function correctly.

Setup



⚠ WARNING

Incorrect procedures can result in death, injury, or property damage. Learn to use equipment correctly.

Adjust Reel Winder

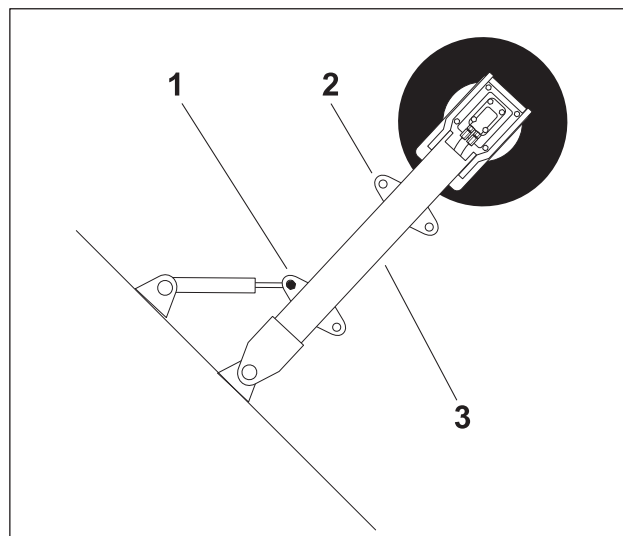
1. Lower reel carrier.
2. Turn ignition switch to STOP.
3. Remove reel.



⚠ WARNING

Crushing weight could cause death or serious injury. Use proper procedures and equipment or stay away.

4. While supporting lever arm (3), remove bolt (1) that attaches hydraulic lift cylinder to lever arm.
5. Attach cylinder rod to the correct mounting hole for your diameter reel:
 - For 2-5' (61-152 cm) diameter reels, attach to bottom mounting hole (1).
 - For 5-7' (152-213 cm) diameter reels, attach to top mounting hole (2).



ReelWinder.eps

Drilling Attachment



⚠ DANGER Turning shaft will kill you or crush arm or leg. Stay away.

To help avoid injury:

- Do not straddle trench or drill pipe while drilling. Keep everybody at least 10' (3 m) away from drill pipe during operation.
- Keep all persons away from material being installed. If swivel malfunctions, material being installed can rotate.
- Use a guide to align drill rod when starting a bore. Guides are available from your Ditch Witch dealership.

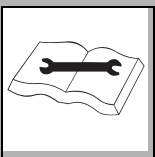


⚠ WARNING Jobsite hazards could cause death or serious injury. Use correct equipment and work methods. Use and maintain proper safety equipment.

To help avoid injury: Set up warning barriers and keep people away from equipment and jobsite while drilling.



⚠ WARNING Incorrect procedures could result in death, injury, or property damage. Learn to use equipment correctly.



⚠ WARNING Improper control function could cause death or serious injury. If control does not work as described in instructions, stop machine and have it serviced.

To help avoid injury:

- Do not alter controls. Improper control function can cause serious injury.
- Do not tape or tie down switch or lever.
- Stop drilling and turn off power supply if releasing control does not stop turning shaft. Have unit repaired.

Trench Depth Meter

Trench Depth Meter (TDM) is an optional electronic system for measuring and recording trench depth. TDM also displays productivity and distance while trenching. Two lines of information are displayed on the LED screen. If the system detects error conditions, diagnostic codes will be displayed on the second line.

IMPORTANT: For more information about TDM see the TDM Operator's Manual (p/n 054-117).

Chain, Teeth, and Sprockets

Chain and Tooth Maintenance

- Always replace sprockets at the same time you replace the digging chain. Sprockets and chain are designed to work together. Replacing one without the other will cause premature wear of the new part.
- Keep digging teeth sharp. Using dull, worn teeth will decrease production and increase shock load to other trencher components. It can also cause chain stretch, which leads to premature chain wear and failure.
- Maintain the proper amount of tension on the digging chain. Overtightening will cause chain stretch and loss of machine performance. For correct tightening procedure, see page 138.
- Use the tooth pattern most appropriate for your digging conditions. If you move to a different soil type, contact your Ditch Witch dealer for information about the most effective chain type and tooth pattern.

Chain Types

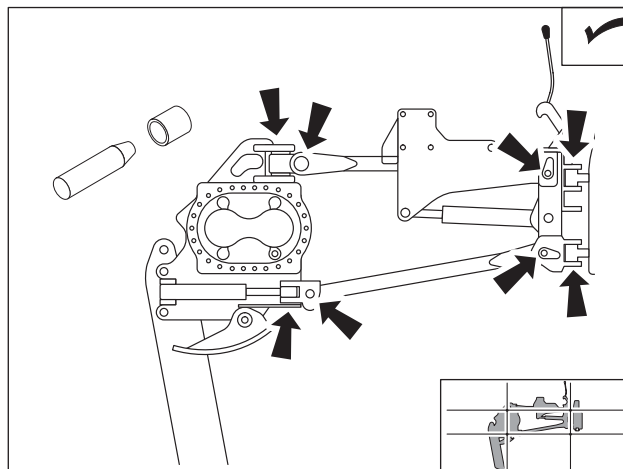
Chain type	Features
4-pitch	standard chain
2-pitch	more teeth for smoother cutting
alternating side bar	prevents spoil compaction on chain
bolt-on adapters	allow easy configuration changes
Shark Chain II	versatile, virtually maintenance-free
combination	provides pick and shovel effect

10 Hour

Location	Task	Notes
TRACTOR	Check engine oil	DEO
	Check air filter indicator and clean dust trap	
	Check water separators and fuel filter	
	Check hydraulic fluid	THF
	Check hydraulic hoses	
	Check coolant level	DEAC
	Check hoses	
	Check radiator fins	
TRENCHER	Lube trencher tail roller	EPG
	Lube trencher pivot	EPG
	Lube trencher auger bearings	EPG
	Lube trencher auger shaft	EPG
	Check trencher auger bolts	
	Check digging chain teeth and bits	
	Check digging chain tension	
	Check boom mounting bolts	250 ft•lb (339 N•m)
	Check attachment mounting bolts	200 ft•lb (271 N•m)
	Check personnel restraint bar bolts	350 ft•lb (475 N•m)
PLOW	Lube plow pivots	EPG
	Check plow vibrator oil	MPL
	Check plow arm pins and bushings	
	Check plow connector pivots	
	Check attachment mounting bolts	200 ft•lb (271 N•m)

Check Plow Arm Pins and Bushings

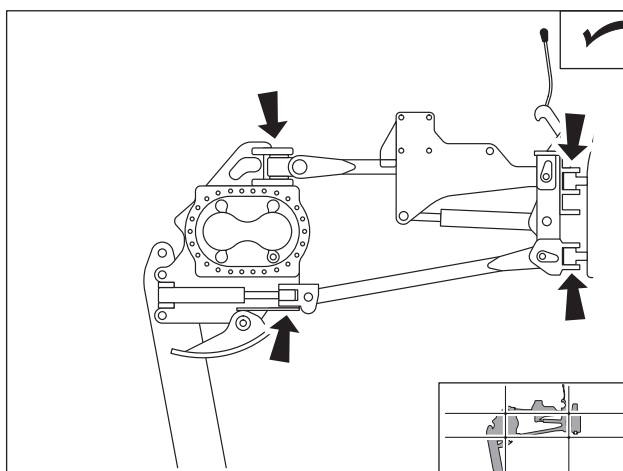
Check plow arm pins and bushings every 10 hours. Tighten as needed.



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Check Plow Connector Pivots

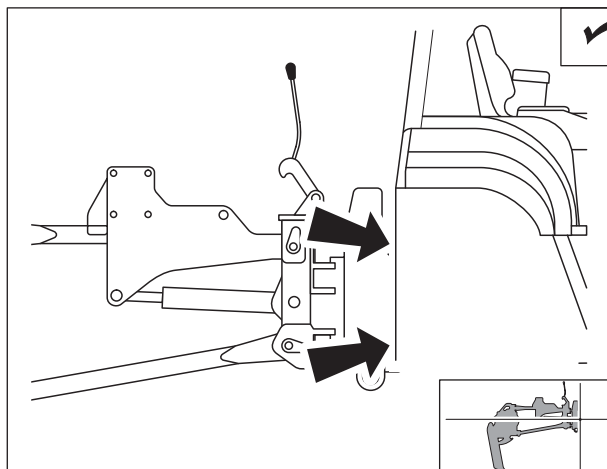
Visually check pivots every 10 hours for wear or damage.



t30om068h.eps

Check Attachment Mounting Bolts

Check mounting bolts every 10 hours and torque as necessary to keep bolts and other fasteners tight. Check for looseness or wear. Apply Loctite 271[®] adhesive. Check that bolts are torqued to 200 ft•lb (271 N•m).



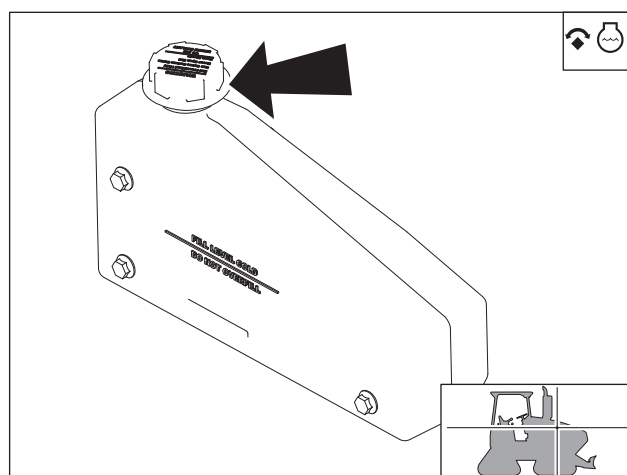
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Test Radiator SCA Level

IMPORTANT:

- Always check expiration date on 3-Way Heavy Duty Coolant Test Kit. An expired kit will not give accurate readings.
- See page 129 for more information on approved coolants.

Test SCA level every 500 hours using 3-Way Heavy Duty Coolant Test Kit (p/n 256-032). If SCA levels do not fall within appropriate range, replenish with a heavy-duty coolant conditioner such as John Deere coolant conditioner (p/n 256-033).



t30om034h.eps

Plow

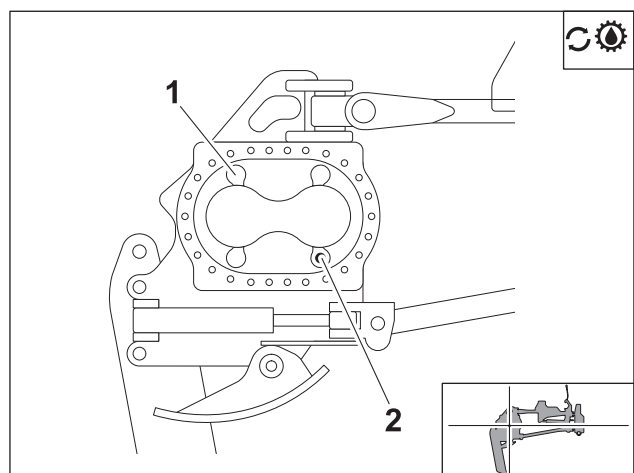
Change Plow Vibrator Oil



CAUTION Hot parts may cause burns. Do not touch until cool.

Change plow vibrator oil every 500 hours. If normal operating temperature exceeds 100° F (38° C), change plow vibrator oil every 250 hours.

Drain oil at drain plug (2). Replace plug and move plow vibrator to horizontal position. Add MPL at fill until oil is halfway up sight glass (1). Refill capacity is 4 qts (3.8 L).



t30om066h.eps

To install chain:

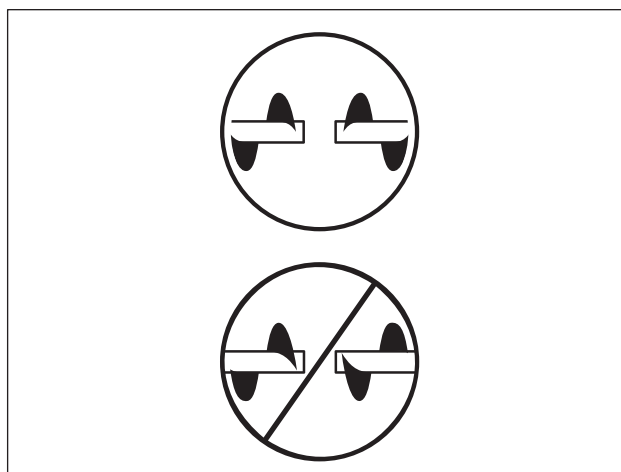
1. Lay chain on ground with teeth down and pointed toward unit.
2. Fasten and adjust seat belt.
3. Start tractor. See page 64 for start-up procedures.
4. Disengage parking brake and verify parking brake indicator is off.
5. Move ground drive control to reverse.
6. Back unit up until chain extends past head shaft about 1' (305 mm).
7. Move ground drive control to neutral.
8. Lower backfill blade, if equipped, to ground.
9. Lower boom to horizontal position.
10. Engage parking brake and verify parking brake indicator is on.
11. Turn ignition switch to STOP.
12. Pull rear end of chain over and about 10" (260 mm) past tail roller.
13. Use hoist to pull front end of chain over head shaft sprocket.
14. Move chain down boom until chain connector pin and lock key can be installed. Install connector pin and lock key.
15. Tighten chain by pumping EPG into grease cylinder.

Time Augers

Ensure that augers are balanced, as shown. If auger timing is off, unit will bounce from side to side even in normal digging conditions.

To adjust timing:

1. Remove bolts holding augers to auger shaft and rotate either auger as needed until augers are balanced.
2. Reinstall bolts and tighten securely.



Augers_Adjust.eps

Operation		U.S.	Metric
Forward speeds			
	Low	2.1 mph	3.4 km/h
	Medium	4.0 mph	6.4 km/h
	High	7.2 mph	11.6 km/h
Reverse speeds			
	Low	2.1 mph	3.4 km/h
	Medium	4.0 mph	6.4 km/h
	High	4.2 mph	6.8 km/h
Vehicle clearance circle (SAE) wall to wall with optional backfill blade			
	Front steer only	39.5 ft	12 m
	Coordinated steer	27 ft	8.2 m
Ground clearance		15.5 in	394 mm
Basic unit weight		15240 lb	6913 kg
Maximum allowable tractor weight		25000 lb	11340 kg
Front counterweight		2100 lb	950 kg

Backfill Blade (optional)		U.S.	Metric
Blade width		80 in	2.03 m
Blade height		17 in	430 mm
Lift height above ground		26 in	660 mm
Blade drop below ground		10 in	254 mm
Maximum swing angle (left/right)		30°	30°
Tilt angle (up/down)		24°	24°

L	Headshaft overhang	48 in	1.22 m
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*Left edge of machine is defined as outside of digging chain guard

Operation		U.S.	Metric
Maximum headshaft speed			
	Ratio low	239 rpm	239 rpm
	Ratio standard	293 rpm	293 rpm
	Ratio high (not recommended)	394 rpm	394 rpm
Maximum digging chain speed			
	Ratio low	621 ft/min	189 m/min
	Ratio standard	761 ft/min	232 m/min
	Ratio high	1024 ft/min	312 m/min

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