

Fitting Instructions

Automatic Mow Speed Selection Kit LMAC236

Jacobsen GP400 & Jacobsen G-PLEX III



WARNING: If incorrectly used this machine can cause severe injury. Those who use and maintain this machine should be trained in its proper use, warned of its dangers and should read the entire manual before attempting to set up, operate, adjust or service the machine.

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This safety symbol indicates important safety messages in this manual. When you see this symbol, be alert to the possibility of injury, carefully read the message that follows, and inform other operators.

2.1 OPERATING INSTRUCTIONS

- Ensure that the instructions in this book are read and fully understood.
- No person should be allowed to operate this machine unless they are fully acquainted with all the controls and the safety procedures.
- Never allow children or people unfamiliar with these instructions to use this machine. Local regulations may restrict the age of the operator.

2.2 SAFETY SIGNS

- It is essential all safety labels are kept legible, if they are missing or illegible they must be replaced. If any part of the machine is replaced and it originally carried a safety label, a new label must be affixed to the replacement part. New safety labels are obtainable from Ransomes dealers.

2.3 STARTING THE ENGINE

- Before starting the engine check that the brakes are applied, drives are in neutral, guards are in position and intact, and bystanders are clear of the machine.
- Do not run the engine in a building without adequate ventilation.

2.4 DRIVING THE MACHINE

- Before moving the machine, check to ensure that all parts are in good working order, paying particular attention to brakes, tyres, steering and the security of cutting blades.
- Replace faulty silencers, mow only in daylight or good artificial light
- Always observe the Highway Code both on and off the roads. Keep alert and aware at all times. Watch out for traffic when crossing or near roadways.
- Stop the blades rotating before crossing surfaces other than grass.
- Remember that some people are deaf or blind and that children and animals can be unpredictable.
- Keep travelling speeds low enough for an emergency stop to be effective and safe at all times, in any conditions.
- Remove or avoid obstructions in the area to be cut, thus reducing the possibility of injury to yourself and/or bystanders.

- When reversing, take special care to ensure that the area behind is clear of obstructions and/or bystanders. DO NOT carry passengers.
- Keep in mind that the operator or user is responsible for accidents or hazards occurring to other people or their property.
- When the machine is to be parked, stored or left unattended, lower the cutting means unless the transport locks are being used.
- While mowing, always wear substantial footwear and long trousers. Do not operate the equipment when barefoot or wearing open sandals.
- Check the grass catcher frequently for wear or deterioration. After striking a foreign object inspect the lawnmower for damage and make repairs before restarting and operating the equipment.
- If the machine starts to vibrate abnormally, check immediately.

2.5 TRANSPORTING

- Ensure that the cutting units are securely fastened in the transport position. Do not transport with cutting mechanism rotating.
- Drive the machine with due consideration of road and surface conditions, inclines and local undulations.

2.6 LEAVING THE DRIVING POSITION

- Park the machine on level ground.
- Before leaving the driving position, stop the engine and make sure all moving parts are stationary. Apply brakes and disengage all drives. Remove the starter key.

2.7 SLOPES

TAKE EXTRA CARE WHEN WORKING ON SLOPES

- Local undulations and sinkage will change the general slope. Avoid ground conditions which can cause the machine to slide.
- Keep machine speeds low on slopes and during tight turns.
- Remember there is no such thing as a "safe" slope.
- Travel on grass slopes requires particular care.

2.8 BLOCKED CUTTING CYLINDERS

- Stop the engine and make sure all moving parts are stationary.
- Apply brakes and disengage all drives.

- Release blockages with care. Keep all parts of the body away from the cutting edge. Beware of energy in the drive which can cause rotation when the blockage is released.
- Keep other people away from the cutting units as rotation of one cylinder can cause the others to rotate.

2.9 ADJUSTMENTS, LUBRICATION AND MAINTENANCE

- Stop the engine and make sure all moving parts are stationary.
- Apply brakes and disengage all drives.
- Read all the appropriate servicing instructions.
- Use only the replacement parts supplied by the original manufacturer.
- When adjusting the cutting cylinders take care not to get hands and feet trapped when rotating cylinders.
- Make sure that other people are not touching any cutting units, as rotation of one cylinder can cause the others to rotate.
- To reduce the fire hazard, keep the engine, silencer and battery compartments free of grass, leaves or excessive grease.
- Replace worn or damaged parts for safety.
- When working underneath lifted parts or machines, make sure adequate support is provided.
- Do not dismantle the machine without releasing or restraining forces which can cause parts to move suddenly.
- Do not alter engine speed above maximum quoted in Engine Specification. Do not change the engine governor settings or over speed the engine. Operating the engine at excessive speed may increase the hazard of personal injury.
- When refuelling, STOP THE ENGINE, DO NOT SMOKE. Add fuel before starting the engine, never add fuel while the engine is running.
- Use a funnel when pouring fuel from a can into the tank.
- Do not fill the fuel tank beyond the bottom of the filler neck.
- Replace all fuel tank and container caps securely.
- Store fuel in containers specifically designed for this purpose.
- Refuel outdoors only and do not smoke while refuelling.
- If fuel is spilled, do not attempt to start the engine but move the machine away from the area of spillage and avoid creating any source of ignition until fuel vapours have dissipated.
- Allow the engine to cool before storing in any enclosure.

- Never store the equipment with fuel in the tank inside a building where fumes may reach an open flame or spark.
- If the fuel tank has to be drained, this should be done outdoors.
- Do not spill fuel onto hot components.
- When servicing batteries, DO NOT SMOKE, and keep naked lights away.
- Do not place any metal objects across the terminals.

DANGER - Indicates an imminently hazardous situation which, if not avoided, **WILL** result in death or serious injury.

WARNING - Indicates a potentially hazardous situation which, if not avoided, **COULD** result in death or serious injury.

CAUTION - Indicates a potentially hazardous situation which, if not avoided, **MAY** result in minor or moderate injury and property damage. It may also be used to alert against unsafe practices.



Refer to local legislation and standards for the appropriate use of personal protective equipment and the disposal of waste.



Battery posts, terminals and related accessories contain lead and lead compounds

WASH HANDS AFTER HANDLING



DISCONNECT THE BATTERY BEFORE WORKING ON THE ELECTRICS



Batteries produce explosive gases and contain corrosive acid and supply levels of electrical current high enough to cause burns.

3.1 PREPARATION

CAUTION: Read the tractor's manual and become familiar with the tractor, the controls and proper use of the equipment.

Stay alert for potential hazards and follow all safety precautions. Read all instructions completely and make sure you understand them before proceeding with the assembly

1. Park the tractor on a flat and level surface, fully lower the implements to the ground, engage parking brake, stop the engine and remove key from ignition switch.
 - a. Wait for all movement to stop before making any adjustments or modifications.
 - b. Take this opportunity to thoroughly inspect the equipment and perform other maintenance.

The "Right" and "Left", "Front" and "Rear" of the machine are referenced from the operator's right and left when seated in the operator's seat facing the direction of forward travel.

3.2 IMPORTANT NOTE**CAUTION**

Contact with diesel fuel & Gasoline can damage your skin. Use gloves when working with diesel fuel & Gasoline. If you come in contact with diesel fuel & Gasoline, wash it off immediately.

**WARNING**

- Catch fuel and dispose of properly.
- To avoid a fire hazard, clean up any spilled fuel.

**CAUTION**

Dispose of used diesel fuel & Gasoline in accordance with local regulations.

3.3 REMOVE EXISTING FOOTPEDAL/MOW SPEED ARRANGEMENT

1. Remove Footpedal, but retain all pivot hardware including bushings/collars/brackets.
2. Disconnect mow/transport speed cable from mechanism, and remove from machine. Including switch. (Parts no longer required)
3. Remove pivot hardware for brake locking plate. Retain hardware.
4. Unscrew footplate, and discard. (Retain hardware.)



3.4 ASSEMBLE NEW FOOT PLATE

1. Assemble transport speed stop and bolt arrangement which acts as bellcrank stop
2. Secure footplate to chassis.
Note: It is beneficial to secure footpedal bracket (A) to footpedal prior to commencing fitting of the automatic mow speed mechanism.
3. Assemble all hardware, transport stop, spring fixing point, bellcrank stop. (SeeParts Breakdown)
4. Re-assemble brake locking plate pivot.



3.5 ASSEMBLE AUTOMATIC MOW SPEED MECHANISM

1. Assemble mechanism as detailed opposite. Also use parts breakdown plus exploded diagram for further information regarding this assembly.



3.6 FIT MECHANISM TO MACHINE

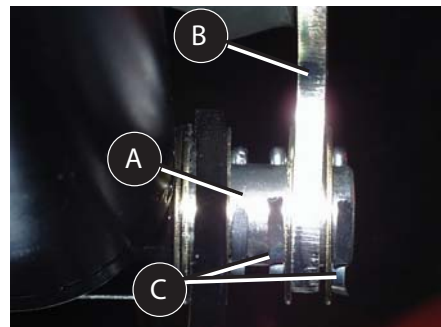
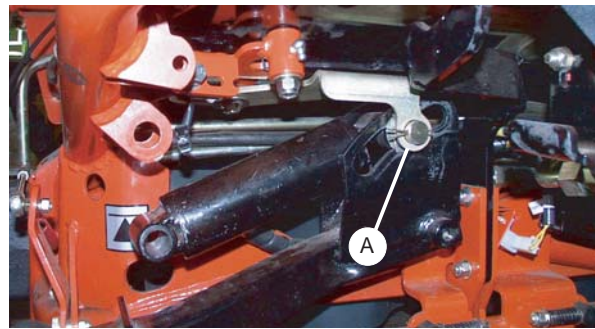
1. Remove outer ram pivot pin, from RH lift ram. Retain Hardware removed
2. Offer mechanism, built up previously, and assemble to underside of footplate.

Note: G-Plex: a split pin and washer to be assembled either side of lockout link when connected to inner ram pin (A).

3. Secure Bellcrank pivot to under side of footplate.
4. Re-connect ram pin.

Note: GP400: Locate pin 84382 (A) from kit and replace inboard ram pin. Locate lockout link (B) between split pins & washers (C).

5. Secure Bellcrank pivot to under side of footplate.
4. Re-connect outer ram pin.



3.7 FIT SPRING

1. Loop spring through bellcrank assy and extend spring over fixing point. Refer to adjustment section 4.1.1 for clarification.
2. Secure spring in place with nut.



3.8 FIT NEW FOOTPEDAL

1. Mount new footpedal, using all existing hardware removed previously.



3.9 REMOVE MOW CABLE

1. Remove control panel.
2. Cut all cable ties securing cable to old mechanism
3. Remove Cable/lever from control panel, and discard
4. Re-assemble control panel to Machine.



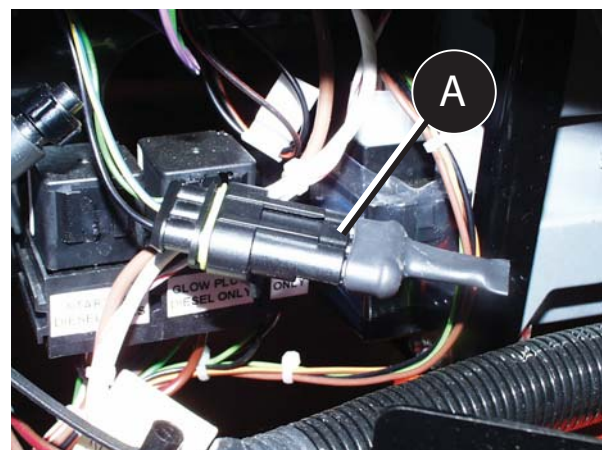
3.10 MOW SWITCH (G-Plex)

1. Using switch bypass wire, "loop" out switch as mow switch is no longer required, and secure harness under footplate



3.11 MOW SWITCH (GP400)

1. Using switch bypass (A), "loop" out switch as mow switch is no longer required.



4.1 SPEED CONTROL PEDAL

⚠ WARNING ⚠

This procedure **MUST** be performed as specified and only by properly trained service personnel.

Adjusting the speed control screw out (increasing length) will reduce the mow speed. Adjusting the speed control screw in (shortening length) will increase mow speed.

Determine which direction to adjust the mow speed screw. Loosen the locking nut and adjust speed control screw, snug up the locking nut and run the time test again, repeat as necessary. When correct mow speed has been obtained, tighten the locking nut (See Fig. 4.1.1).

TO SET BELLCRANK STOP SCREW:

NOTICE

The bellcrank stop screw has been set at the factory and should **NOT** require adjustment. If stop screw is loosened or removed, it **MUST** be properly installed and adjusted prior to unit operation.

Remove the screws securing the center foot panel and remove panel (this will allow access to the lockout link angle).

Loosen the nut on the bellcrank stop screw just enough to allow the screw to be slid to the left of the slot (See Fig.4.1.3).

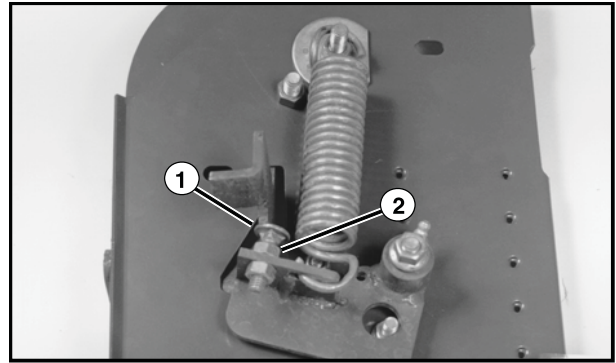


Figure 4.1.1
1. Mow Speed Adjustment Screw
2. Locking Nut

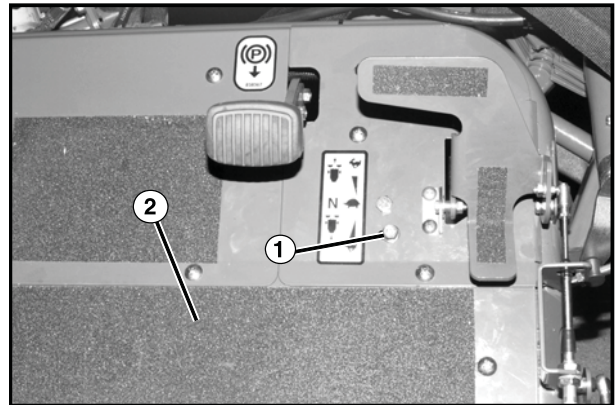


Figure 4.1.2
1. Bellcrank Stop Screw
2. Center Foot Panel

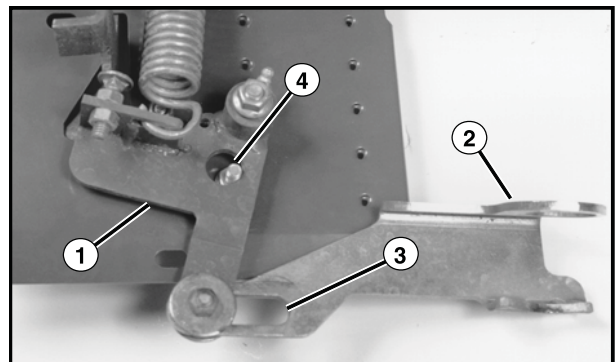


Figure 4.1.3
1. Bellcrank
2. Lockout Link Angle
3. Lockout Link slot
4. Bellcrank Stop Screw

Rotate bellcrank clockwise (as viewed from above) and hold the bushing on the lockout link angle to the left end of the lockout link slot (See Fig. 4.1.4).

Slide the bellcrank stop screw to the left of the slot located in the foot panel (See Fig. 4.1.2) making sure the bellcrank contacts the stop screw.

With the screw held tightly against the bellcrank, tighten the stop screw nut.

Install the center foot panel.

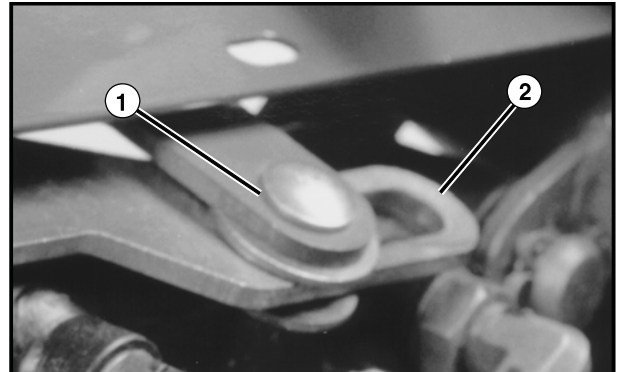


Figure 4.1.4
Position Bushing to Left of Slot

4.2 MOW/TRANSPORT SPEED CONTROL

When cutting heads are raised completely, the wheel drive speed range is 0 – 7.5 mph (0 – 12 Km/hr). Speed is controlled by use of the direction/speed control pedal as described in control pedals section.

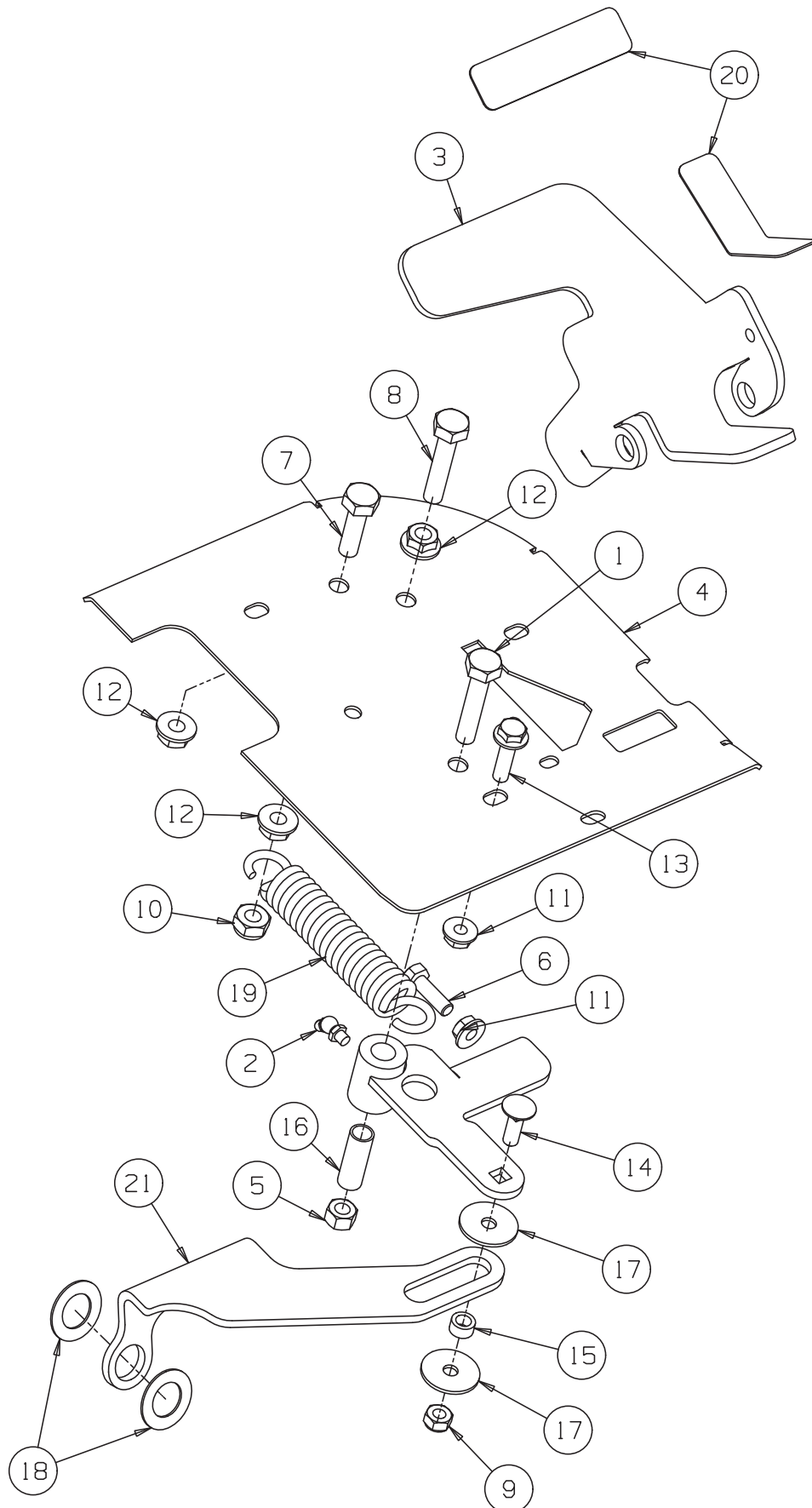
When cutting heads are lowered, the forward movement of the direction/speed control pedal is restricted by the automatic mow speed control linkage (the bellcrank stop screw contacts the foot pedal tab which rotates the pedal upward. This in turn reduces the ground speed of the unit for mowing). The mow speed range is 0 – 3.8 mph (0 – 6.1 Km/hr).

4.3 ADJUSTING MOW SPEED

To determine mow speed, run a time check on how fast the unit travels in a distance of 50' (15.24 M). Prepare a level surface with enough room to start and end beyond the 50' marks.

Place a stake in the ground where you want to begin timing the unit. Measure and place another stake at a distance of 50' (15.24 M). Lower the cutting heads and press the direction pedal forward so the unit is traveling at full throttle (the cutting heads should be in the neutral position when timing the unit).

Begin timing the unit when the center of the front tire aligns with the first stake. Stop timing when the center of the front tire aligns with the stake placed at 50' (15.24 M). Estimated time for 3.8 mph (6.1 Km/hr) will be approximately 8.8 to 9.2 seconds. If there is a significant difference in the times listed above, you can adjust the mow speed as follows.



4 PARTS LIST

**JACOBSEN GP400 & G-PLEX
AUTOMATIC MOW SPEED SELECTION
FITTING INSTRUCTION MANUAL**

ITEM	PART NO	DESCRIPTION	QTY	REMARKS
1	001090016	Scrw-Hex 3/8-16 x 2	1	
2	002993063	Lubricator	1	
3	4115061	Traction Pedal	1	
4	4119282	RH Footplate	1	
5	450120398	Nut-Hex Nyloc 3/8-16	1	
6	450192	Scrw-Hex M8 x 25	1	
7	450216	Scrw-Hex M10 x 35	1	
8	450219	Scrw-Hex M10 x 50	1	
9	450378	Nut-Hex M8 Nyloc	1	
10	450379	Nut-Hex M10 Nyloc	1	
11	450453	Nut-Hex M8 Verbus Ripp	2	
12	450454	Nut-Hex M10 Verbus Ripp	3	
13	450473	Scrw-Hex M8 x 30 Verbus Ripp	1	
14	452564	Bolt-Crg M8 x 25	1	
15	515268	Bushing	1	
16	523221	Spacer	1	
17	548159	Washer	2	
18	548168	Washer	2	
19	829500	Spring	1	
20	840003	Tread, Control Panel	2	
21	841487	Lockout Link	1	
22	893359	Ballcrank Ay, Lockout	1	
*	454000297	Split Pin 1/8" x 1 1/4"	2	
*	4152177	Switch Bypass Harness	1	G-Plex III
*	843821	Pin Cylinder Pivot	1	GP400
*	4227580	Link Mow Mode Switch Bypass	1	GP400

NOTES

