HEAVY METAL
MOBILE PLANT SAFETY

PRE-START INSPECTIONS

SKID STEER LOADER

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Plant pre-start inspections occur once the plant has been introduced to the site and provide an opportunity to check for any indicators that the plant may not operate safely before it is put into use for the day.

The pre-start inspection should involve checks in the following sequence:

1. Before the plant is turned on (walk around)

Generally, this step considers operating features of the plant as further detailed in this presentation, e.g., hydraulics, batteries, oils, coolants, fuel, tracks, booms, plant safety features, condition of attachments, etc.

2. Once the plant is turned on (functional checks)

This step is a check that all controls that are used by the operator are functioning correctly – including hand controls, reversing beepers, lights, park brakes etc.

3. Initial operation of the plant (initial operation).

The final step should be guided by the Original Equipment Manufacturers (OEM) manual and involves operating the mobile plant for a short distance to confirm that the plant is operating without any indicators that there may be issues.

NOTE:

The following is a general overview of key items that need to be regularly checked to ensure a skid steer loader is fit for use.

Pre-start inspections should be completed using pre-start tools developed for that particular type of plant, taking into account:

- The Original Equipment Manufacturers (OEM) manual
- Results of the plant risk assessment
- Legislative requirements
- Any site-specific specifications for plant.

Where an item is identified as being defective, faulty or not to a satisfactory standard, it must be reported to your leader.

They must take suitable action(s) to address the identified risk e.g., place it out of service and refer for repair.

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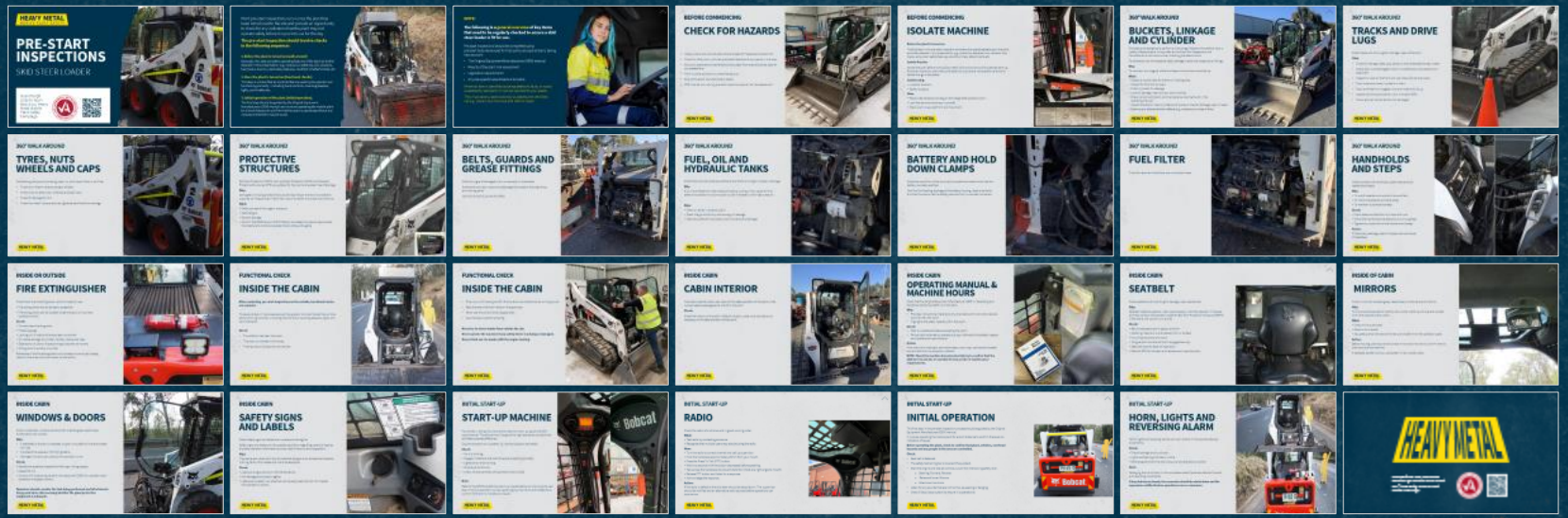

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BEFORE COMMENCING

CHECK FOR HAZARDS

- Visually check around and above the skid steer for hazards and personnel.
- Check for other plant, vehicles, overhead hazards and any people in the area.
- Exclusion zones and or barriers should be used. Work area should be clear of any pedestrians.
- Plant must be parked on suitable flat ground.
- Ensure the plant is fundamentally stable.
- PPE must be worn during pre-start inspections as per the risk assessment.

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BEFORE COMMENCING

ISOLATE MACHINE

Before the plant is turned on

This first step in the pre-start inspection considers the operating features of the plant as further detailed in this presentation, e,g. hydraulics, batteries, oils, coolants, fuel, tracks, arms, plant safety features, condition of any attachments, etc.

Isolate Machine

Isolate the plant before conducting a 360° walk around to avoid accidental start-up. Ensure all hydraulic, pneumatic and electrical circuits are not operational and any stored energy is dissipated.

Isolate using:

- Lockable isolators
- Starter isolators

How:

- Place a red personal lock/tag on the designated isolation point.
- Lock the cab and place keys in pocket.
- Check plant is secured from any movement.

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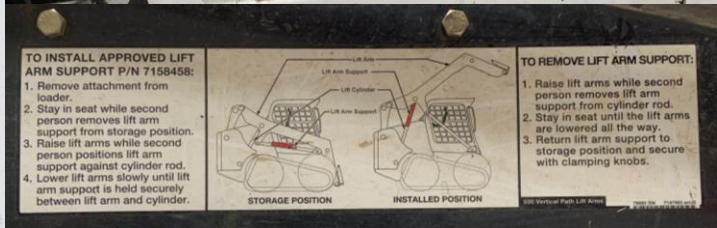

360° WALK AROUND

BUCKETS, LINKAGE AND CYLINDER

Skid steers are designed to perform a wide range of tasks and therefore have a variety of attachments. Always refer to the Plant Risk Assessment and Manufacturer's Instructions when checking the attachments.

For example, look for excessive wear, damage, cracks and loose pins or fittings,

Why:

To maintain the integrity of the skid steer and avoid structure failure.

What:

- Inspect pins and bolts for broken or missing parts.
- Inspect for fluid and oil leaks
- Check cylinders for seepage
- Look for damage, wear and any abnormalities
- Check correct lubrication and maintenance (can be found in the operating manual)
- Inspect the boom, check cylinders and hydraulic lines for damage, wear or leaks
- Examine any attachments for defects e.g., sweepers, brushes or forks.

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360° WALK AROUND

TRACKS AND DRIVE LUGS

Check tracks and drive lugs for damage, wear and tension.

What:

- Check for damage, deep cuts, abrasion and embedded foreign matter
- Check idler is not damaged or bent, it is sufficiently lubricated and in alignment.
- Inspect for wear on the front and rear idlers and centre rollers.
- Track rollers are intact, no debris in them.
- Clean and free from clogged mud and material build up.
- Inspect the drive sprocket for worn or broken teeth.
- Tracks are well tensioned and not damaged.

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360° WALK AROUND

TYRES, NUTS WHEELS AND CAPS

Considering the type of tyre being used, i.e., solid, foam filled, or air filled.

- Check tyre inflation levels and signs of leaks.
- Check tyres for deep cuts in the face and side walls.
- Check for damage to rims
- Check the wheel nuts are securely tightened and free from damage.

360° WALK AROUND

PROTECTIVE STRUCTURES

Roll Over Protection (ROPS), Falling Object Protection (FOPS) and Operator Protective Structures (OPS) are suitable for the plant and appear free of damage.

Why:

Damaged or missing protective structures may reduce the level of protection supplied by the guarding. If identified, report to leader and place out of service.

What:

- Check corrosion from age or moisture
- Metal fatigue
- General damage
- Confirm that ROPS and/or FOPS fitted to skid steers include an appropriate manufacturer's compliance plate that is visible and legible.

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360° WALK AROUND

BELTS, GUARDS AND GREASE FITTINGS

Check for signs of damaged (worn or cracked) or loose belts.

Guards are locking in place to protect against access to the engine bay and moving parts.

Look for dirt build up and any leaks.

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360° WALK AROUND

FUEL, OIL AND HYDRAULIC TANKS

Check that all fluids levels are sufficient and there is no signs or leaks or damage.

Why

If oil or fuel leaks from high-pressure hoses or piping, it may cause a fire or defective operation and can cause injuries if released under high pressure.

What

- Check oil levels in hydraulic tank.
- Check the ground for any obvious sign of leakage.
- Check for sufficient lubrication and no evidence of damage.

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360° WALK AROUND

BATTERY AND HOLD DOWN CLAMPS

Check the condition of the terminals, the cable connection and that the battery is suitably earthed.

Look for fluid leaking, damage to the battery housing, loose nuts/bolts and that the clamp has the battery secured from unwanted movement.

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FUEL FILTER

Check for leaks and that there are no cracked hoses.

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360° WALK AROUND

HANDHOLDS AND STEPS

Check condition of handholds, cleanliness and slip resistance of steps.

Why:

- To avoid hazards such as slips, trips and falls.
- To improve access to awkward areas.
- To maintain 3 points of contact.

Check:

- Check steps are free from dirt, dust and mud.
- Check the handholds and steps for any oil or grease.
- Tighten any loose bolt of the handrails and steps.

Action:

If there is any damage, report to supervisor and repair immediately.

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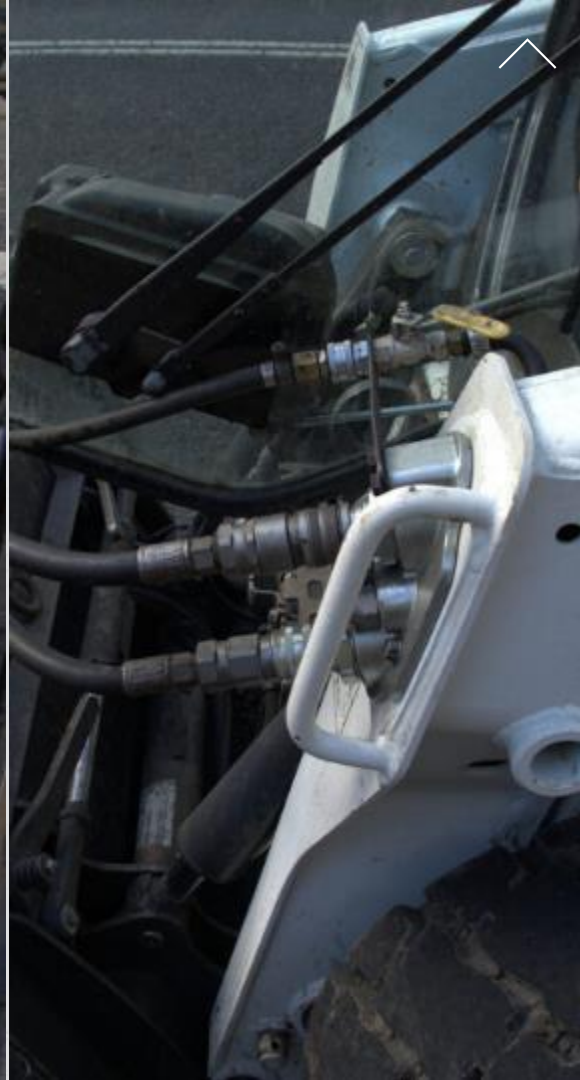

INSIDE OR OUTSIDE

FIRE EXTINGUISHER

Check there is a fire extinguisher, and it is ready for use.

- Fire extinguishers should be easily accessible.
- Fire extinguishers can be located inside the cabin or mounted outside (or both).

Check:

- Correct class of extinguisher
- Pressure gauge
- Locking pin is intact and tamper seal not broken
- No visible damage to cylinder, handle, nozzle and hose
- Date stamp on yellow inspection tag is less than 6 months
- Extinguisher is suitably mounted

Remember if the fire extinguisher is out of date or cannot be located, report to the supervisor and locate an alternative.

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FUNCTIONAL CHECK

INSIDE THE CABIN

After conducting pre-start inspections on the outside, functional checks are required.

This second step in the process allows the operator to check that all the controls are functioning correctly, including hand controls, reversing beepers, lights, and park brakes etc.

Check:

- The isolation has been removed.
- The door is unlocked with the key.
- Three points of contact are maintained.

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FUNCTIONAL CHECK

INSIDE THE CABIN

- Enter only with the engine off, lift arms down and attachments on the ground.
- Face the seat with both hands on the grab bars.
- Never use the control levers as grab bars.
- Use the steps made for entering.

Never try to start a loader from outside the cab.

Never operate the machine if any safety device is missing or damaged.

Never climb out of a loader with the engine running.

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INSIDE CABIN

CABIN INTERIOR

The cleanliness of a cabin can obstruct the safe operation of the plant or the workers safe access/egress to and from the plant.

Check:

Check the interior of the cabin is free of rubbish, clutter and any items not necessary to the safe operation of the plant.

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INSIDE CABIN

OPERATING MANUAL & MACHINE HOURS

Check that the Original Equipment Manufacturer (OEM) or Operating and Maintenance Manual (O&M) is in the cabin.

Why:

- Provides instructional material by the manufacturer to correctly operate and maintain the plant.
- Highlights the safety hazards within the plant.

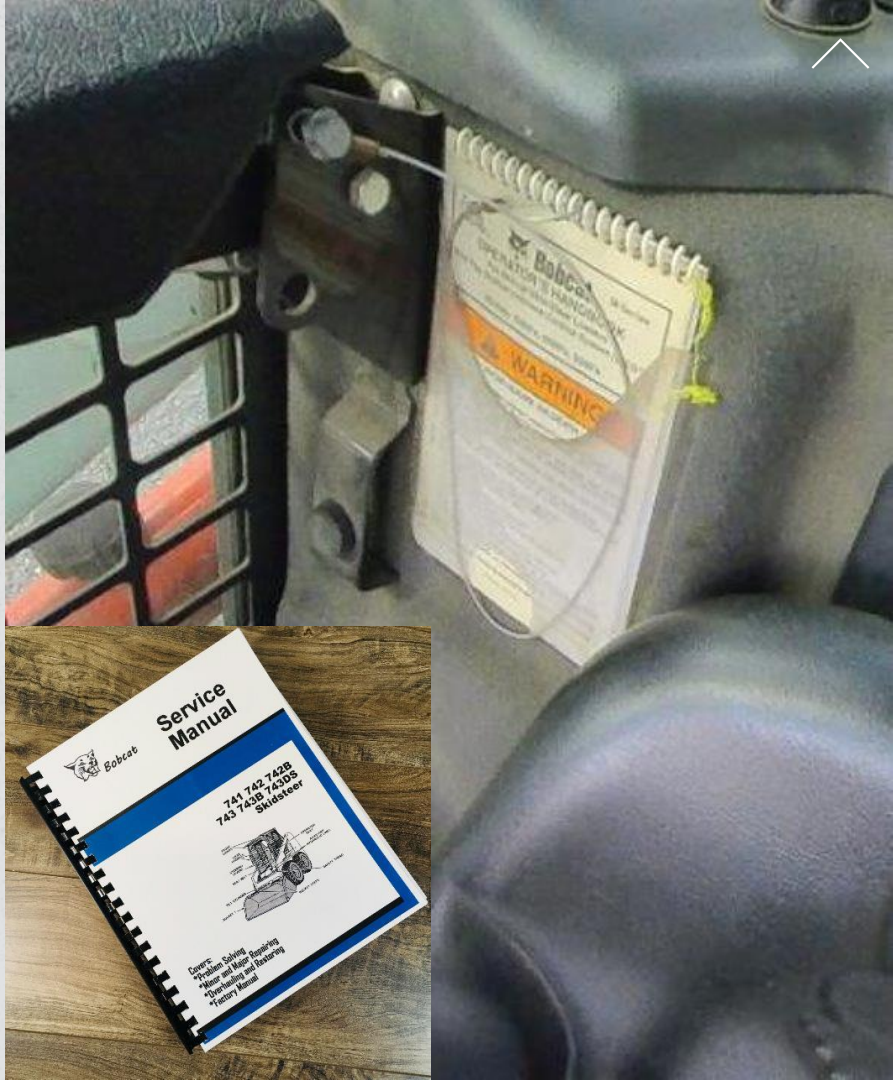
Check:

- O&M is understood before operating the plant .
- Periodically reviewed by operators to stay informed of the safety hazards and operational requirements.

Action:

If the manual is missing or cannot be read, a new copy can be downloaded and printed from the supplier's website.

NOTE: Check the machine hours/service history to confirm that the skid steer is not due or overdue for any service or maintenance requirements.



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INSIDE CABIN

SEATBELT

Check seatbelt and mounting for damage, wear, adjustment.

Why:

Operator restraint systems, when used properly, hold the operator in the seat and help contain the operator inside the Roll Over Protection Structure (ROPS) in the event of a collision or tip-over.

Check:

- Belt is retractable and in good condition
- Webbing material is not shredded, torn or twisted
- Mounting hardware and bolts
- Tongue latch and ensure that it engages securely
- Seat belt label for date of installation
- Refer to OEM for life span and replacement requirements.

INSIDE OF CABIN

MIRRORS

Check mirrors for cracked glass, cleanliness, functionality and visibility.

Why:

To improve the operator's visibility around the machine and prevent contact with other people and/or plant.

What:

- Check mirrors are clean
- Glass is not cracked
- Adjusted so that the area at the rear can be seen from the operator's seat

Action:

Before moving, look around and check mirrors and monitor to confirm that no one is around the machine.

If assessed as safe to do so, use spotter if view is obstructed.

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INSIDE CABIN

WINDOWS & DOORS

Check windshield, windows and doors for cracked glass, cleanliness, functionality and visibility.

Why:

- A shattered or broken windscreen or door is not safe while the skid steer is in use.
- It protects the operator from flying debris.
- Damaged windows can obstruct the operator's view.

Check:

- Identify the potential hazards from falling or flying objects .
- Assess the risk .
- Consult with original equipment manufacturers (OEMs) for operator cabin protection and glass options .

Operators should consider the task being performed and attachments being used when risk assessing whether the glass/protective equipment is adequate.

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INSIDE CABIN

SAFETY SIGNS AND LABELS

Check safety signs and labels are in place and are legible.

Safety signs and labels provide operator guidance regarding potential hazards and safe operation information such as load limits and ratio of gradient.

Why:

They serve as a visual reminder of potential dangers such as electrical hazards, moving parts, hot surfaces and chemical exposure.

Check:

- Labels and signs comply to AS/NZ Standards
- Not damaged and clearly legible
- Labels are located in an area that can be easily seen and do not impede the operator's visibility.

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INITIAL START-UP

START-UP MACHINE

Put the key in the ignition and let the machine warm up as per the OEM requirements. This allows the oil to get to the right temperature before the skid steer operates effectively.

Ensure the machine is isolated (i.e. interlocking lever activated).

Check:

- Horn is working.
- Gauges, indicators and controls are all operating correctly.
- Lights are on and working.
- Wipers are functional.
- Check reverse cameras are operational and visible.

Note:

Refer to the OEM for additional start-up checks before commencing the next step in the process that involves operating the plant for a short distance to confirm there are no indicators or issues.

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RADIO

Check the radio is functional and in good working order.

What:

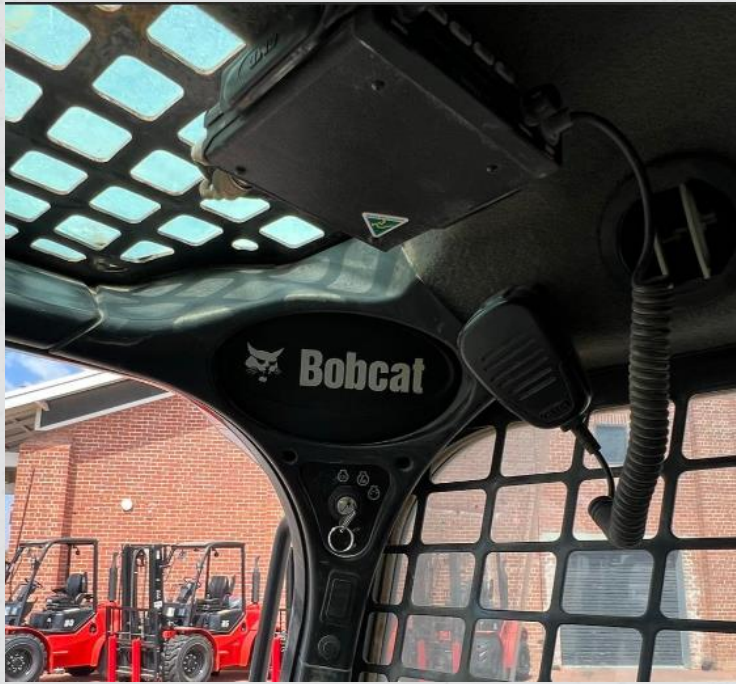
- Test radio by contacting someone.
- Recognise that multiple users may also be using the radio.

How:

- Turn the radio to correct channel and call up supervisor.
- Hold the handpiece approximately 25mm from your mouth.
- Press the Press To Talk (PTT) button.
- Wait two seconds with the button depressed before speaking.
- Talk across the handpiece to prevent distortion (hold at a right angle to mouth).
- Release PTT button and listen for a response.
- Acknowledge the response.

Action:

If the radio is defective the skid steer should be stood down. The supervisor should be notified and an alternative radio sourced before operations can commence.



INITIAL OPERATION

This final step in the pre-start inspection process should be guided by the Original Equipment Manufacturers (OEM) manual.

It involves operating the mobile plant for a short distance to confirm there are no indicators of issues.

Before operating the plant, check to confirm that plant, vehicles, overhead hazards and any people in the area are controlled.

Check:

- Seat belt is fastened.
- The safety/restraining bar is lowered (if equipped).
- Start the engine and test all controls. Lower the interlocking safety lever.
    - Steering, Forward, Reverse
    - Raise and lower lift arms
    - Attachment controls
- Listen for any sounds that are not normal, squeaking or banging.
- Check E-Stop (stop button) to ensure it is operational.

INITIAL START-UP

HORN, LIGHTS AND REVERSING ALARM

Horns, lights and reversing alarms can warn others in the area of skids teer movements.

Check:

- Free of damage and functional.
- Lights are flashing and clearly visible.
- Reversing alarms emit a distinct sound and are clearly audible.

Note:

Managing the risk of plant in the workplace code of practice refers to forward and reversing movements.

If any defects are found, the excavator should be stood down and the supervisor notified before operations can re-commence.

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