Taurus MESO

SET-UP MANUAL



TAURUS 650 SET-UP INSTUCTIONS

IMPORTANT WARNING

SET UP AND PRE-DELIVERY SERVICE OF THE TAURUS MUST BE PERFORMED BY AN AUTHORIZED TAURUS DEALER. Proper set-up and pre-delivery service is essential for vehicle reliability and rider safety. An oversight or error made by the mechanic assembling and servicing the new unit can result in faulty operation or damage to the vehicle, or possible injury to the operator of the vehicle. A customer taking delivery of his new vehicle expects it to be in perfect running condition. Poor preparation will result in unnecessary customer dissatisfaction.

We strongly recommend that the dealer and mechanic adhere to the following:

- Identify and inspect the components before assembly.
- Read and carry out all instructions as detailed.
- Adhere to all cautions and warnings.
- Tighten all fasteners to the specified torques.
- Do not substitute any fasteners.
- Do not lay tools or components on the vehicle, scratching or other damage may occur. Place mats on the foot rests to prevent them from being scratched during the assembly and test drive.
- Perform the final vehicle inspection and clean-up.
- Inform Ontario Drive and Gear Ltd. immediately of any irregularities, or problems you encounter.
- Return the completed vehicle inspection check list to Untario Drive and Gear Ltd. along with the vehicle warranty registration form.

ATTENTION

Pay special attention to the following symbols:

WARNING

This warning symbol identifies special instructions which if not strictly observed, can result in severe personal injury or loss of life.

CAUTION

This caution symbol identifies special instructions which if not strictly observed can result in damage to the vehicle.

NOTE:

Indicates points of particular importance for more efficient and convenient operation.

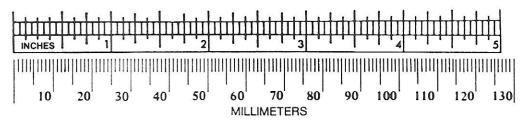
PREFACE

This manual provides the necessary instructions and lists the tools required to properly assemble and pre-service the TAURUS 650 Off Road Utility Vehicle.

METRIC AND INCH SCALES

There are metric and inch size fasteners used on the TAURUS. Use the correct tools and do not substitute fasteners.

- Metric designation in millimeters, ie. M10 means 10 millimeters.
- Inch designation, ie. 1/4" means 1/4 inch.



TORQUE TABLE

TOOL LIST

The following is a list of tools which are required to assemble the TAURUS 650 vehicle. The use of air powered tools will speed up assembly of the vehicle.

DESCRIPTION

Allen Wrench, 3/16"	Philips Screw Driver
Allen Wrench, 1/4"	Hook Spanner, Proto-
Socket Extension, 6"	Mac Tool #C471) or
Socket, 7/16", deep,	or TAURUS # 485-01
Socket, 9/16" or Wrench	Needle Nose Vice Grip
Socket, 13/16", deep	Chisels (2)
Socket, 1 1/8", deep with extension	Rod or Punch, 1/4" dia
Socket, 1 5/16"	Hammer
Socket, 17mm	Claw Hammer
Wrench, 10mm	Rubber Mallet
Wrench, 12mm	Hot Air Gun
Wrench, 17mm	Knife
Wrench, 3/8"	Wire Cutters or Snips
Wrench, 7/16"	Litium Grease
Wrench, 1/2"	Anti-Seize Compound
Wrench, 15/16"	Torque Wrench
Nut Driver, 5/16" or Slot Screw Driver	
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PARTS LIST

The following is a list of parts contained in the shipping carton which must be assembled to the main vehicle chassis.

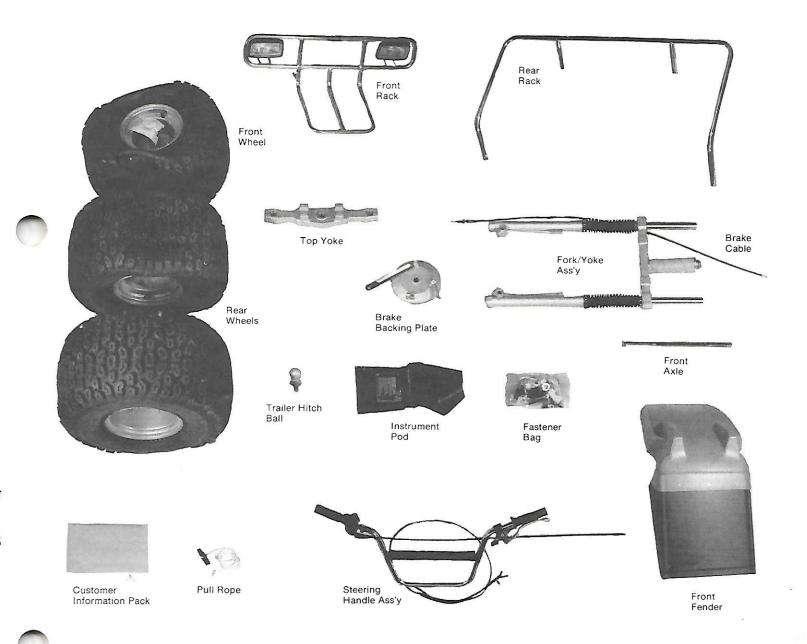
Qty.	Description	Remarks
1	TRAILER COUPLER BALL	incl nut, washer
1	INSTRUMENT POD ASS'Y	cover, pod, switch
1	REAR RACK	incl inserts
1	FRONT RACK ASS'Y	incl headlights
1	AXLE SHAFT	front axle
1	HANDLE BAR ASS'Y,	bar, grips
1	UPPER YOKE	
2	REAR WHEEL/HUB ASS'Y	wheel, hub, nuts
1	FRONT FENDER ASS'Y	fender & flap
1	BACKING PLATE/TORQUE ARM A	ASS'Y, drum, arm, nuts
1	FRONT WHEEL/AXLE ASS'Y	wheel, axle, tube
1	FORK/YOKE ASS'Y	fork, yoke, shaft

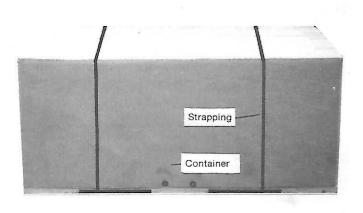
The following is a list of parts found in the small items bag, packed on the top of the shipping foam.

Part #	Qty.	Description	Where Used
100-64 103-06	8 1	TIE WRAP, black, 5 1/2" BOLT, 5/16 - 18 x 1"	front rack/wiring torque arm to fork
103-08	(C	BOLT, 1/4 - 20 x 1"	rear rack to frame
103-25	ź	PHILIPS SCREW, #10-24x3/4"	pod to console
103-48	2	SELF TAP SCREW, # 10	pod to console
108-03		LOCKWASHER, 1/4"	front rack to yoke
108-03		LOCKWASHER, 1/4"	rear rack to frame
108-06		LOCKWASHER, 3/8"	to frame, bump stop
108-08	3	FLAT WASHER, 1/4"	fendr to rack/yoke
117-10		LOCKNUT, # 10-24	pod to console
117-15		NUT, 3/8-16	to frame, bump stop
117-21	2 .	LOCKNUT, 5/16-18	torque arm to fork
117-21		LOCKNUT, 5/16-18	cable clip, yoke
117-27	2	LOCKNUT, 1/4"	front rack to yoke
120-05		SPACER, 3/16"	pod to console
406-02	1	DUST SHIELD, 5/8" I.D.	front axle
406-03	2	SPACER RING, 5/8" I.D.	front axle ass'y
412-04	2	HANDLE BAR CLAMP	handle bar
412-16	1	RETAINER, steel	hand brake lever
412-24	1	BRAKE LEVER BOOT	hand brake lever
412-25	1	RUBBER BELLOWS	hand brake lever
412-26	1	ADJUSTING NIPPLE & COLLAR	hand brake lever
412-27	1	ADJUSTER, plastic	hand brake lever
471-15	1	TAPERED ROLLER BEARING	steering column
473-01	1	BOLT, M10x60	rear shock, frame
473-09	3	BOLT, 1/4-20x3/4"	fender, rack/yoke
473-09	4	BOLT, 1/4-20x3/4"	front rack, yoke
473-23	3	SOCKET CAP SCREW,5/16-18x1	1/4"yoke to forks

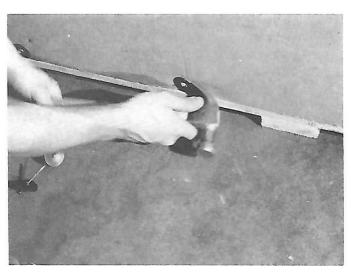
473-25	4	SOCKET CAP SCREW, 1/4-20x1 1/2"	handle bar clamp
473-31	1	SOCKET CAP SCREW,5/16-18x2"	upper yoke, clip
478-12	2	WASHER, 3/4"	rear wheel, axle
481-02	2	COTTER PIN, 5/32x1 3/4"	"
483-03	2	O-RING, # 224	steering column
486-19	1	BUMP STOP	to frame
486-22	1	CABLE CLIP, 3/8'	upper yoke
487-01	1	NUT, 5/8-18 Nylok	front axle shaft
487-02	1	LOCKNUT, M10	rear shock, frame
487-06	2	HEX SLOTTED NUT, 3/4-16	rear wheel, axle
488-33	2	HEAT SHRINK TUBE, 1/4x3" long	headlight wires

PARTS DIAGRAM

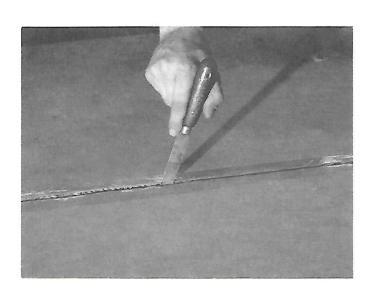




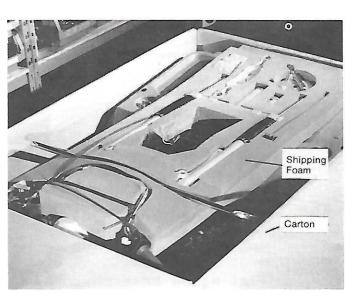
1. Cut and remove the strapping from the carton.



2. Remove the nails securing the cardboard carton to the shipping base.



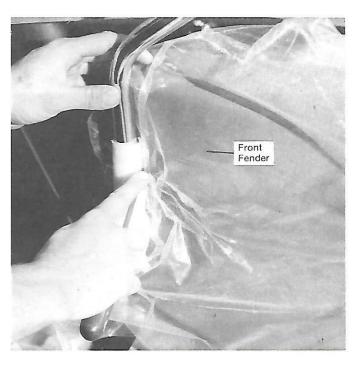
3. Carefully cut the tape between the top flaps of the carton. Take care not to cut into components inside the carton.



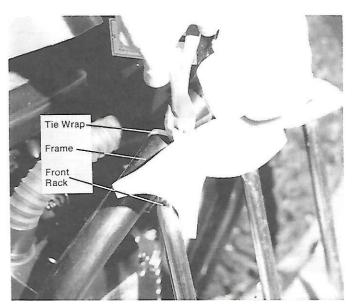
4. Pull the top flaps loose. Lift the carton off the shipping base and discard. Remove the components from the shipping foam and lay on a clean, dry surface for inspection. Remove and discard the foam.



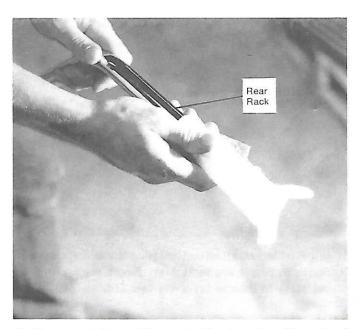
5. Remove the wheels from the base and discard the protective foam.



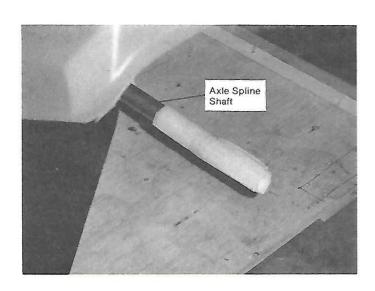
6. Separate the front fender bag from the rear rack by cutting the tape. Remove the fender from the bag.

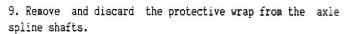


7. Cut the tie wrap securing the front rack to the frame. Remove the foam from the headlights by cutting the tape.



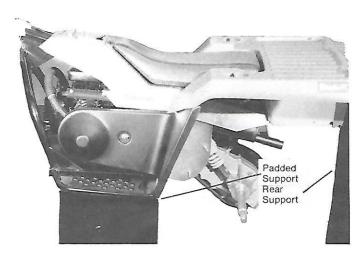
\$. Remove and discard the protective foam from the ends of the rear rack.





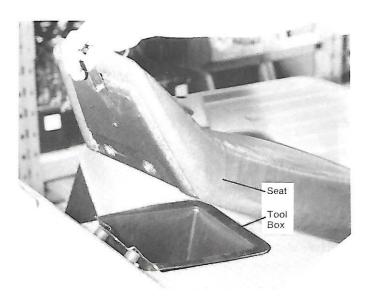


10. Remove and discard the two bolts and washers attaching the frame foot rests to the shipping skid.

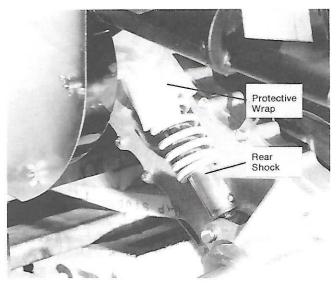


11. Lay all the parts in front of you and check against the photograph on page 4 and parts list. Report any missing or damaged parts to Ontario Drive and Gear Ltd.

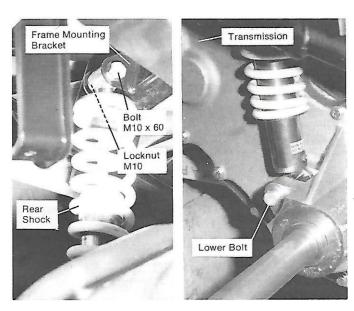
12. NOTE: At least two people are required for the following procedure. Remove the vehicle from its' shipping skid and place it on a solid padded support, at least one foot off the floor. Position the support under the foot rests. The transmission must be free to move. Another support is required at the back of the vehicle, below the rear grab bar.



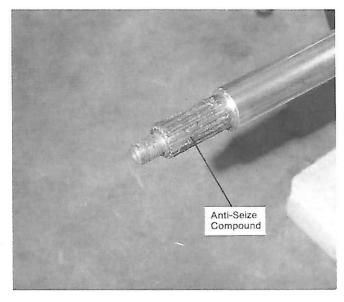
13. Remove the seat and tool box.



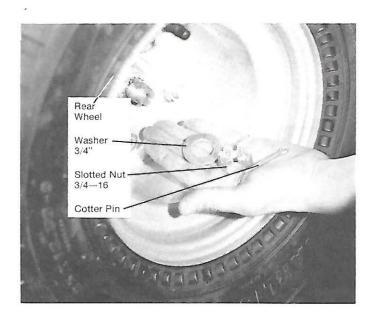
14. Remove the protective wrap from the rear mono shock.



15. Locate the top bushing of the shock in the frame mounting bracket. Have someone assist you in raising and adjusting the transmission in order to align the mounting holes.Install the bolt (M10x60) and lock nut (M10); nut to the left, and tighten to the specified torque. Tighten the lower bolt to the specified torque. Torque both fasteners (43 ft/lbs.; 5.95 kg-m).



16. Apply anti seize compound to the rear axle splines.

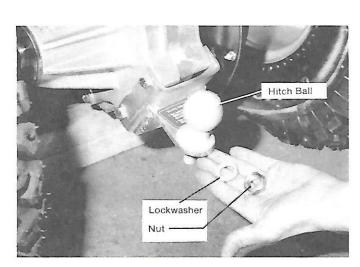


17. Slide the rear wheel assemblies onto the axle splines. Assembly will be difficult unless splines are exactly aligned. Install the washer (3/4 I.D.) and the hex slotted nut (3/4-16) onto the shafts.

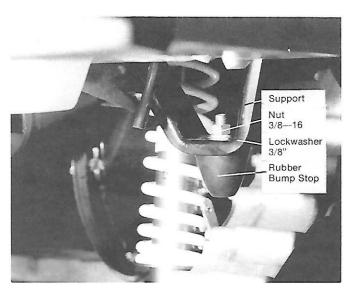


18. Tighten the nut to the specified torque and position it so that a slot aligns with the cotter pin hole in the spline shaft. Install the cotter pin and bend over both ends. Torque nut (140 ft-lbs.; 19.36 kg-m)

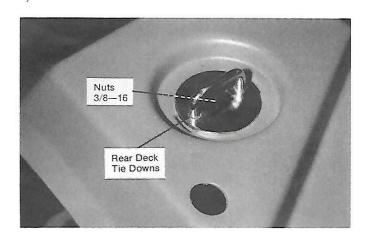
Install both wheel assemblies with the air valve of the tire facing out.



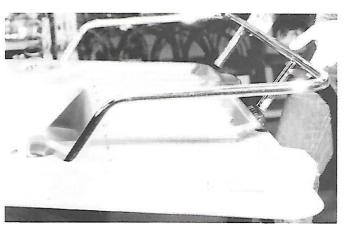
19. Remove the nut and washer from the hitch ball. Locate the hitch ball into the hitch bracket hole at the rear of the transmission. Re-assemble the lockwasher and nut, and tighten.



20. Install the rubber bump stop, lockwasher (3/8") and nut (3/8-16) onto the support behind the fuel tank. Tighten.

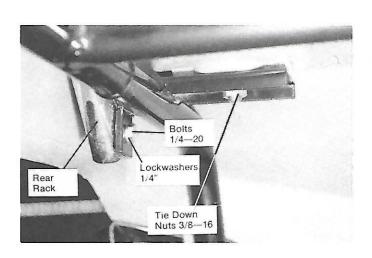


21. Loosen, but do not remove, the two rear deck tie down nuts for easier installation of the rear rack.

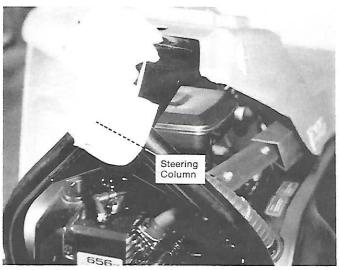


22. Insert the rear rack through the four rear deck holes, front two first. Align the rack mounting holes with the frame brackets and install the four bolts (1/4-20) and lockwashers (1/4). Be sure the tie downs appear centred and flush in the deck recess.

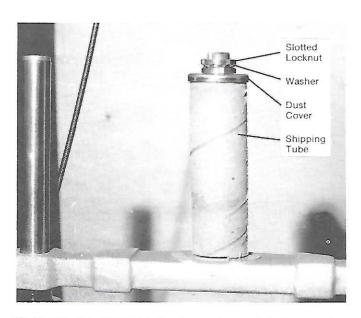
NOTE: If the rack does not easily go into position through the deck, remove a small amount of plastic with a file from the deck where it interferes. Use a prying bar in the rack tubing from below to manoeuver it into position, if necessary.



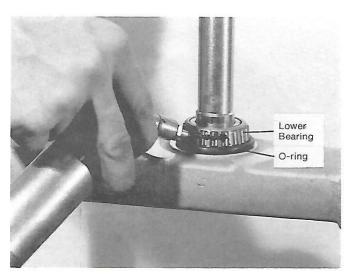
23. Tighten the tie down nuts and then the four rack mounting bolts. Do not over tighten,or stripping of the inserts on the rack tube will occur.



24. Remove and discard the protective wrap from the steering column by removing the rubber band.

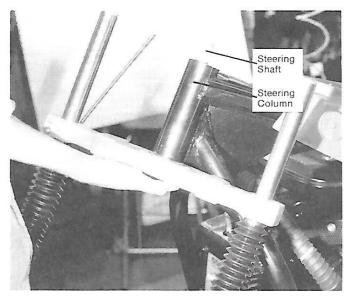


25. Remove the slotted locknuts, washer and dust cover from the steering shaft of the fork/yoke assembly. Remove and discard the protective shipping tube from the steering shaft. Keep the area around the shaft clean.



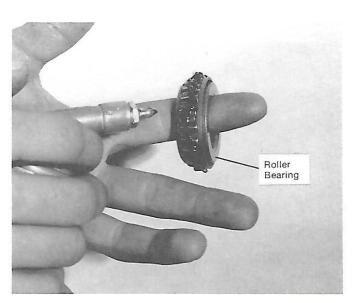
26. Position one o-ring around the lower bearing on the steering shaft/yoke. Apply clean lithium bearing grease to the lower bearing.

CAUTION Maintain cleanliness when installing the o-ring and bearings. Dirt will damage these components.

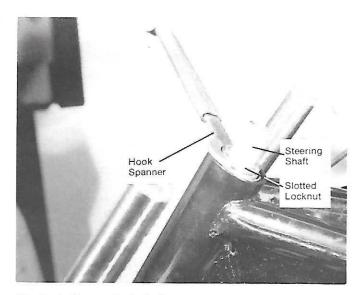


27. Insert the steering shaft of the fork/yoke assembly up into the steering column of the frame.

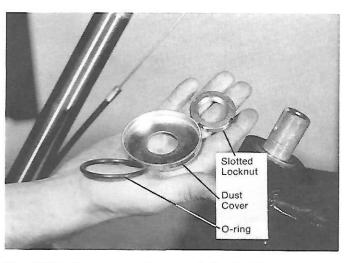
NOTE: Install the fork/yoke assembly so that the straight side of the yoke faces forward.



28. Grease the tapered roller bearing and place it on top of the steering shaft (tapered end down) which is now sitting in the steering column of the frame. Tap it onto the shaft with a soft hammer if necessary.



29. Install one slotted locknut (5/8-18), chamfer up, onto the steering shaft above the bearing. Tighten with a hook spanner until there is no vertical free play in the assembly and the yoke assembly feels tight, but can still be turned from side to side.

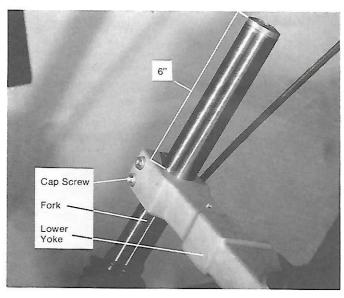


30. NOTE: You may have to support the fork/ yoke assembly to keep it from falling out of the frame steering column during the next procedure.

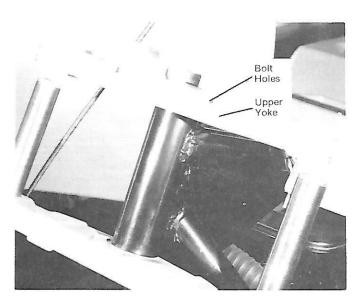
Back off and remove the slotted locknut from the steering column. Install the o-ring, dust cover, and nut again.



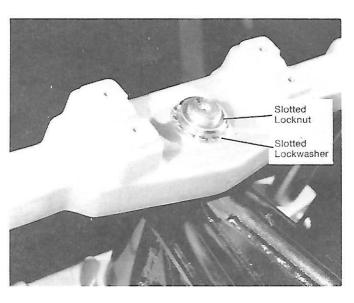
31. Tighten the nut until there is no free play but the yoke turns freely from side to side.



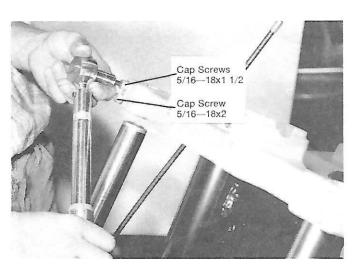
32. Loosen the four socket cap screws on the lower yoke. Press the forks down through the lower yoke until they protrude 6 inches $(15\ cm)$.



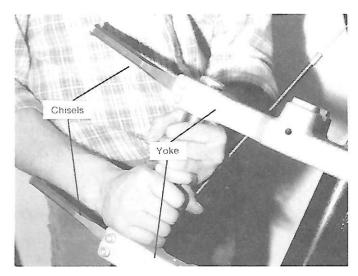
33. Place the upper yoke on top of the steering column; holes on front of yoke must face forward as shown. Gently position the upper yoke down onto the steering shaft until it is seated against the slotted nut.



34. Loosely install the slotted lock washer and slotted locknut (5/8-18) onto the steering shaft. Do not tighten at this time.

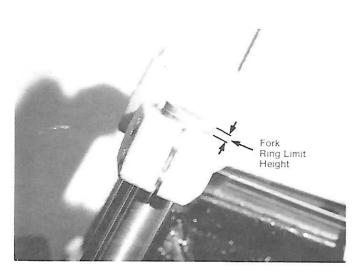


35. Loosely install the four remaining socket cap screws (5/16-18)into the upper yoke. The longer 2 inch cap screw goes into the lower left hole of the yoke, to which a cable clip and locknut (5/16-18)should be attached (see also figure 66).

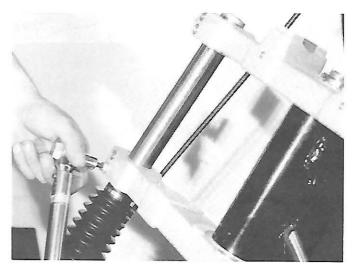


36. Insert chisels to spread the slot of each yoke in order to insert and adjust the forks. Grab the fork at the top and slide it up into the upper yoke hole by twisting and lifting. Install both forks this way.

CAUTION Do not force the chisel into the slot too deep; cracking of the yoke may occur.

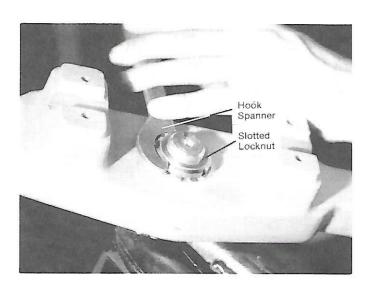


37. Position the height of the forks as shown above.

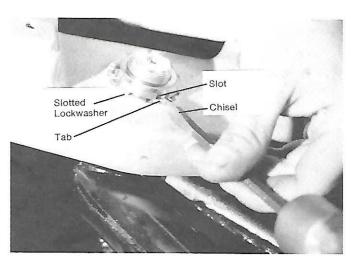


38. Tighten all eight socket cap screws on the two yokes. Torque (8.3.ft-lbs.;1.15 kg-m).

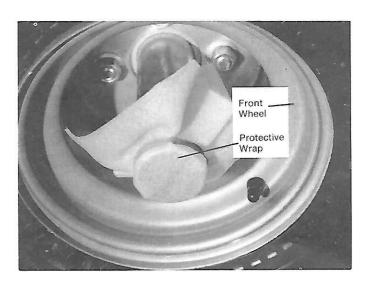
Tighten the two locknuts securing the cable clips on the back of the yokes (see also figure step 66).



39. Tighten the top slotted locknut on the steering column shaft with a hook spanner. Do not over tighten the nut.



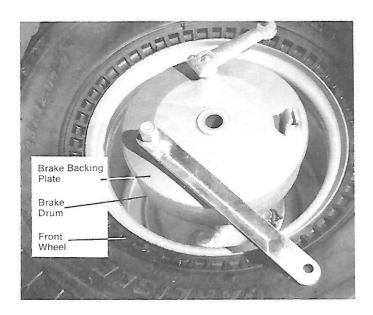
40. Bend up a lockwasher tab into a slot on the nut using a small chisel and hammer. Adjust the nut slightly if necessary to align the tab and slot.



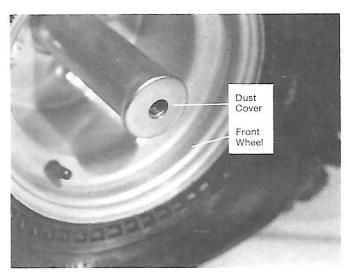
41. Remove and discard the protective wraps from the front wheel axle tube by removing the rubber bands.



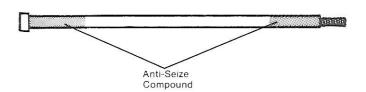
42. Grease and install the spacers into both ends of the front wheel axle tube.



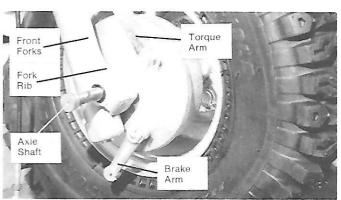
43. Press the brake backing plate evenly into position onto the drum of the front wheel. It should spin freely when mounted.



 $44.\ \mbox{Position}$ the dust cover onto the other end of the front wheel axle housing.

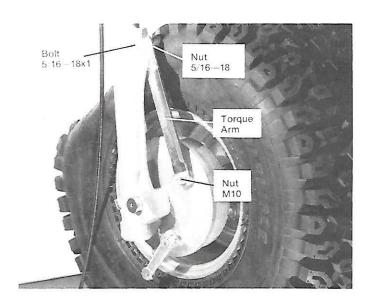


45. Apply anti-seize compound onto the axle shaft ends.



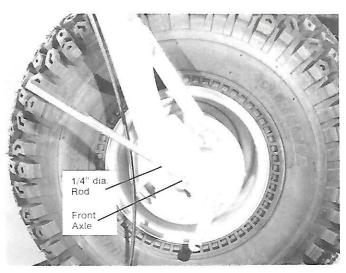
46. NOTE: Two persons are required to carry out the following assembly. Place the front wheel assembly between the forks, with the brake drum on the right side, and brake arm and torque arm as shown above. The forks must be positioned with the rib to the top. Rotate the fork end if necessary.

Lift the front wheel assembly into position so that the axle holes are aligned. Have someone insert and tap the axle shaft through from the right side.

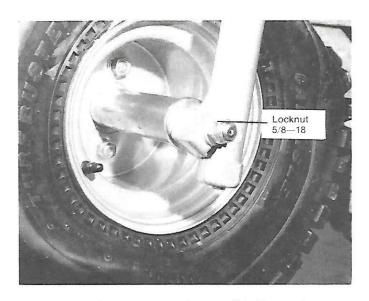


47. Assemble the torque arm of the front brake to the right fork using a bolt (5/16-18x1) and nut (5/16-18); nut to the inside. Tighten and torque the fasteners. Torque $(22\ \text{ft-lbs.};\ 3.04\ \text{kg-m})$.

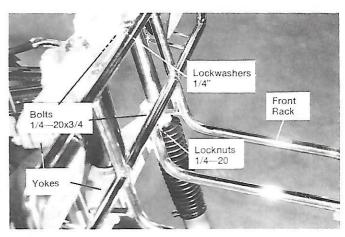
Tighten the M10 nut on the other end of the arm. Torque (29 ft-lbs.; 4.0 kg-m).



48. Insert a 1/4 inch diameter rod into the hole on the head of the front axle shaft to hold it in place for the next assembly.



49. Install and tighten the axle nut (5/8-18) to the specified torque. Torque (20 ft-lbs.; 2.74 kg-m).

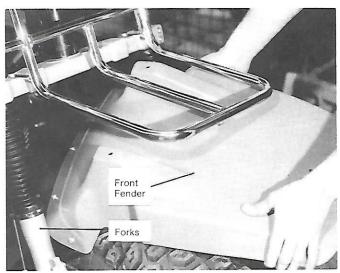


50. Position the front rack against the yokes. Loosely assemble the rack to the upper yoke with the bolts (1/4-20 x3/4) and lockwashers (1/4).

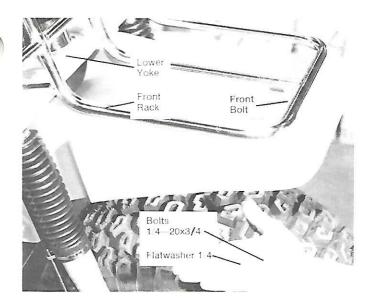
Loosely assemble the rack to the lower yoke with the bolts (1/4-20x3/4) and locknuts (1/4-20); nuts to the inside. Pull the rack away from the yokes and then tighten all fasteners securely. Do not over tighten.



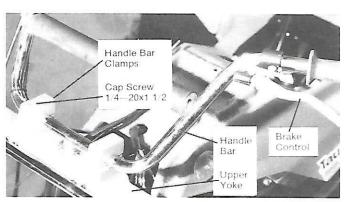
51. Inflate the tires to the specified pressure. Remove the vehicle from the support. Pressure (5 psi.; 0.34 kg-cm 2).



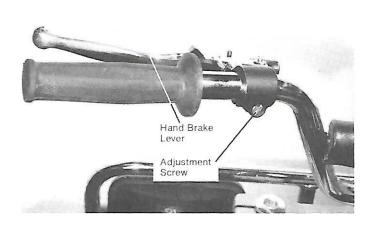
52. Carefully slip the front fender between the front forks.



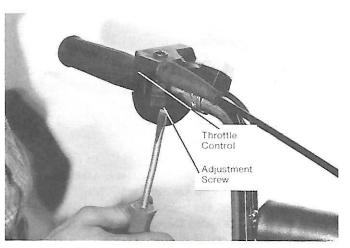
53. Position the fender up against the lower yoke and rack. Insert the three bolts (1/4-20x3/4) and flat washers (1/4). Tighten the front bolt first and then the rest. Do not over tighten.



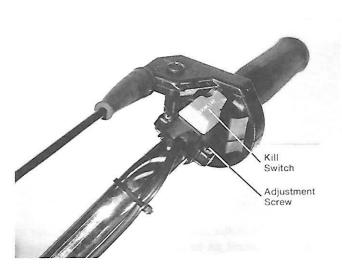
54. Position the handle bar on top of the upper yoke, so that the brake control is on the left. Position the handle bar clamps onto the upper yoke so that the mark on the clamp faces to the rear. Install the four socket cap screws (1/4-20x1 1/2) in the clamps. Angle the handle bar at 45 degrees before tightening to the specified torque. Torque (13 ft-lbs.; 1.79kg-m).



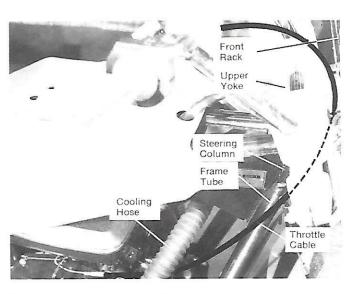
55. Loosen the bottom adjustment screw on the hand brake lever. Adjust the position of the hand brake lever so it is horizontal. Retighten the screw.



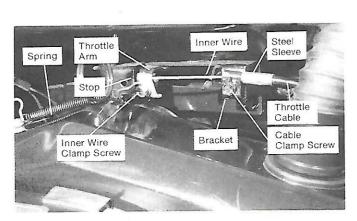
56. Loosen the bottom adjustment screw on the throttle control. Adjust the position of the throttle control so it is horizontal. Retighten the screw.



57. Adjust the position of the kill switch so it can be operated easily and without interference. Loosen the screws, adjust and retighten.

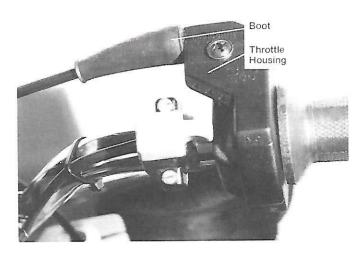


58. Feed the throttle cable between the upper yoke and front rack. Run it past the right side of the steering column, to the outside of the frame tube and under the cooling hose.

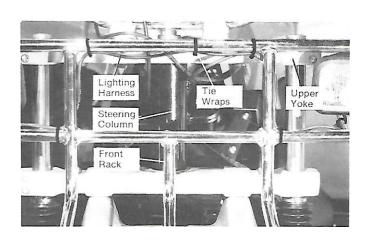


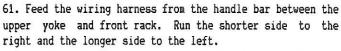
59. Loosen the cable clamp screw on the side of the carburetor. Insert and clamp the steel sleeve fitting of the throttle cable securely to the bracket. Loosen the inner wire clamp screw on the throttle arm of the carburetor. Insert the inner wire under the clamp. Adjust the cable so that the throttle arm rests against the stop when the throttle is closed.

NOTE: You may wish to unhook the spring for easier inner wire installation. Remember to re-attach it.

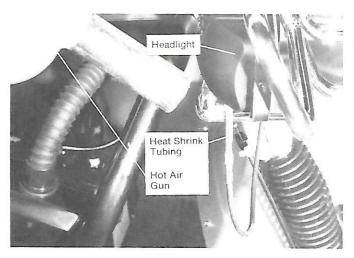


60. Position the rubber boot onto the end of the throttle housing securely.

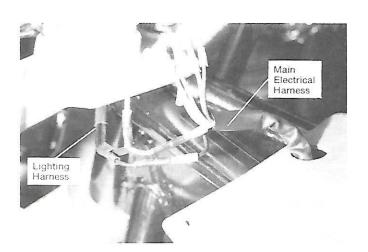




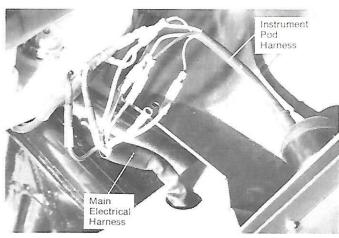
Attach the lighting harness to the front rack with the eight tie wraps as shown above. Adjust the locks so that they are not visible from the front. Do not over tighten. Snip off the loose ends of the tie wraps.



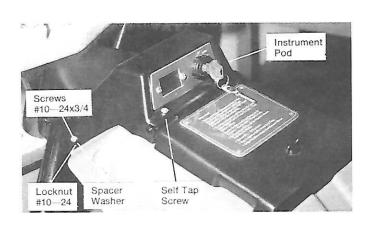
62. Slip a length of heat shrink material over the lighting harness. Connect the harness ends to the wire ends on the lights. Slide the heat shrink over the terminals. Apply heat from a hot air gun to shrink the protective tubing over the connected terminals.



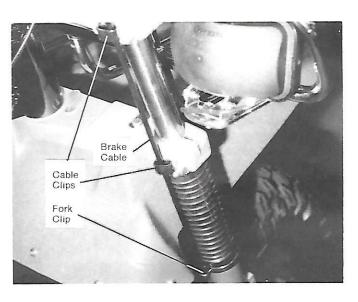
63. Run the lighting harness to the left of the steering column and connect it with the main harness which comes from under the seat consol. Match up the two similar colored wire ends. Make sure that they are connected securely. See also wiring diagram page 25.



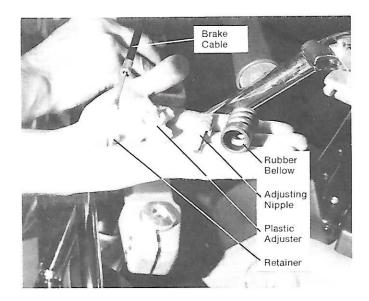
64. Connect the main harness to the instrument pod harness. Match and connect similar colored wires. Make sure they are connected securely so that a short does not occur. Use insulator tape around the connections if necessary.



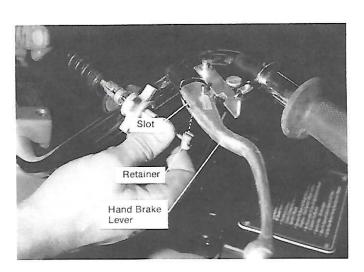
65. Position the instrument pod on top of the seat support console. Make sure no wires are pinched. Press and lock down the wing head on the glove box cover into its' receptacle to properly position the instrument pod. Install the two screws (#10-24x3/4), spacers (3/16") and nuts (#10-24) through the forward holes; nuts to the inside. Install the two self taping screws through the pod into the console. Do not over tighten.



66. If not already in position, slide the front brake cable up through the fork boot clip and two cable clips on the yokes.

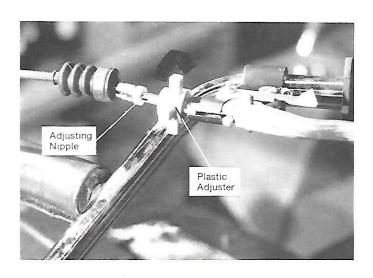


67. Assemble the round rubber bellows, adjusting nipple and collar, plastic adjuster and small steel retainer onto the hand brake end of the brake cable.

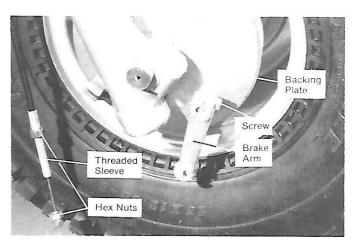


68. Insert the small retainer from the end of the inner wire up into the hole in the hand brake lever. Align the wire with the slots and press it in.

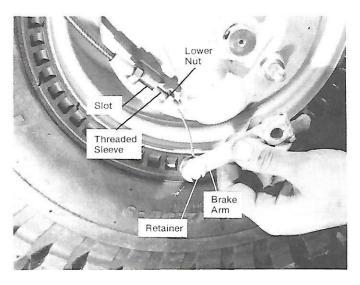
NOTE: Open the slots slightly with a slot screw driver if necessary.



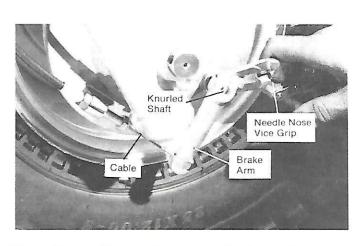
69. Turn the plastic adjuster in the direction of the arrow in the above picture (so no thread on the nipple is showing), then back off 1 1/2 turn.



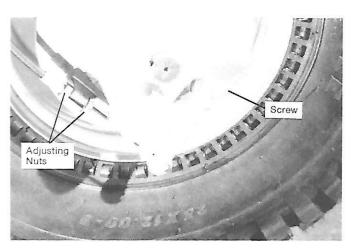
70. Remove the brake arm from the brake drum backing plate by loosening the screw and pulling the arm off the knurled shaft. Remove one hex nut from the threaded sleeve and back off the other nut to the top of the thread.



71. Slip the cable through the slot on the drum plate and insert the threaded sleeve into the bore. Install the lower nut back onto the threaded sleeve, a few threads. Insert the small retainer into the catch on the end of the brake arm.



72. Apply a needle nose vice grip to the knurled brake drum shaft, allowing enough room on the shaft to re-attach the brake arm. Turn the shaft clockwise to apply the brake. Reattach the brake arm to its knurled shaft while still applying the brake with the vice grip and pulling the cable tight. Release the vice grip once the arm is in place.

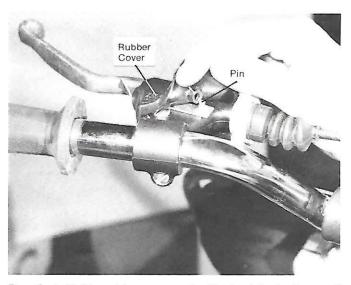


73. Tap the arm all the way onto the shaft and re-tighten the locking screw on the arm. Adjust the nuts to loosen or tighten the brake cable until the vehicle rolls freely when brakes are NOT applied.

Refer to the Front Brake/Parking Brake Adjustment details in the Operator's or Service manual.

WARNING

Proper adjustment of the front brakes is critical for safe operation of the vehicle.



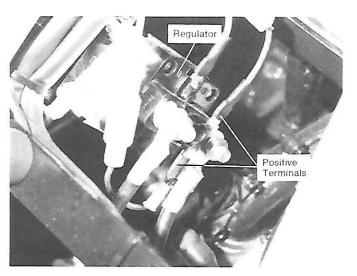
74. Install the rubber cover onto the hand brake lever. It pops on over the pins.



75. Remove the right engine cover to gain access to the main pivot bearing bolt. The vehicle must be resting unloaded, with its wheels on the ground. Tighten the bolt. Torque (140 ft-lbs.; 19.36 kg-m).



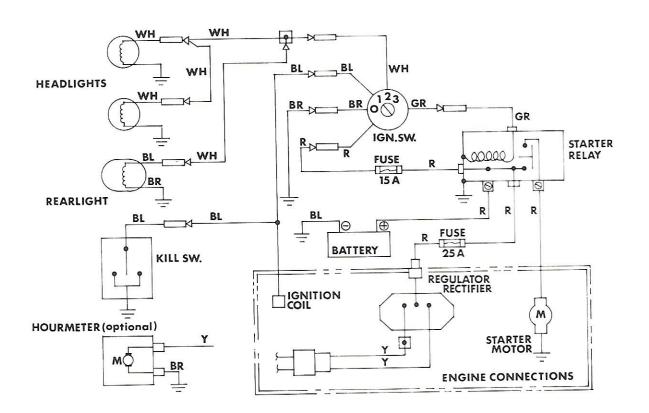
The vehicle must be resting with its wheels on the ground and properly inflated when tightening the main pivot bolt or serious damage will occur to the pivot bushing. Tightening of the bolt to the specified torque is also critical.



76. Connect the positive terminals to the regulator as shown.

- 78. Re-install the tool box and seat.
- 79. Adjust the headlights for proper illumination. Refer to the adjustment details in the Operator's or Service Manual.
- 80. Repair any minor scratches on the body by SLIGHTLY heating the scratch with a propane torch or hot air gun. DO NOT over heat or allow the plastic to become soft or shiney.
- 81. Clean the vehicle off with a clean cloth and mild cleaner such as Armor-All.

WIRING DIAGRAM



GNIT	ION	SWI	TCH C	ONT	ACTS
OFF	0	0			
1st			0	0	
2nd					
3rd				0-	-0
	BI	RR	WH	R	GR

BL= BLACK
BR= BROWN
WH= WHITE
R= RED
GR= GREEN
Y= YELLOW

PRE-DELIVERY CHECK LIST

Check all the items on the Pre-delivery Check List that comes with each vehicle and RETURN it to Ontario Drive and gear along with the vehicle warranty registration form.

- * Check the engine oil level.
- * Check the transmission oil level.
- * Check the tire pressure.
- * Check throttle twist grip operation, free play and routing in all steering positions.
- * Check that all body parts are securely mounted and all fasteners in place:
 - * Front Fender (2)
 - * Rear Deck (2)
 - * Instrument Pod (4)
 - * Front Rack (3)
 - * Rear Rack (4)
 - * Right Engine Cover (2), not touching engine screen
 - * Left Clutch Cover (2)
 - * Console (seat support) (3)
- * Check connection of clutch cooling hose.
- * Check the routing, condition and connection of the transmission went hose.
- * Check for secure fuel hose connections at the engine and filter.
- * Check electrical system for proper operation:
 - * Headlights
 - * Tail light
 - * Kill switch
 - * Starter
 - * Engine starts
 - * all connections tight

Refer to the operator's or service manual for procedure details and specifications to the pre-delivery check list. Below is a sample list for your reference only.

- * Check that all name plates are in place.
- * Check that all warning and important labels are in place and legible.
- * Check that all customer warranty and product literature are enclosed with the vehicle:
 - * Operator's Manual
 - * Vehicle Warranty Registration Form
 - * Engine Operating Manual
 - * Engine Warranty Policy
 - * Engine Electrical diagram
 - * Clutch Guarantee and Registration Card
 - * Battery Instruction and Maintenance Card
 - * Tire Guarantee Pamphlet
- * TEST RIDE: Check performance, handling and operation of the vehicle.
 - * Transmission: Hi, low, reverse ranges engage easily
 - * Acceleration: smooth
 - * Speed: full
 - * Clutch shifting: smooth and full through
 - * Steering and Handling: stable and easy
 - * Idling: smooth
 - * Brakes, front and rear: smooth with good stopping power: front cable secured at three clips on fork.
 - * Check for fluid leaks upon completion of test ride.
- * No visible damage
- * Vehicle clean



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