

STEERING & SHIFT GROUP VI

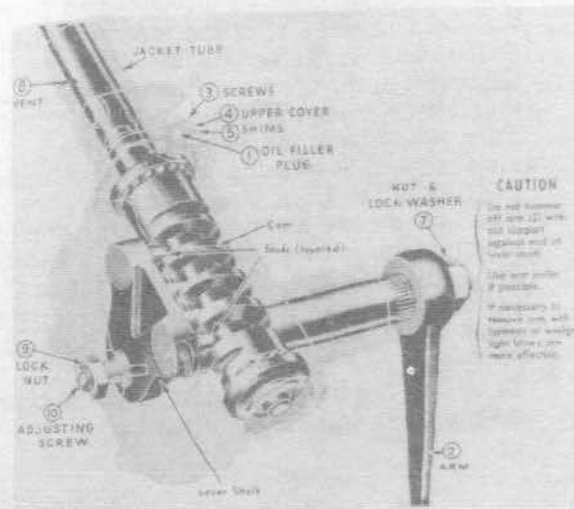
GENERAL

The steering gear used in the Checker is a Ross Twin Lever Type, Model TA-14.

ADJUSTMENTS

When making adjustments free the steering gear of all load, preferably by disconnecting the drag link from the steering arm, and loosen instrument board bracket clamp on steering jacket tube.

If the ball thrust bearings on the cam must be adjusted, make the adjustment (I) before making the side adjustment (II).



through the mid-position while turning the steering wheel slowly from one extreme position to the other.

Backlash of studs in the groove shows up as backlash at steering wheel and at ball on steering arm.

The groove is purposely cut shallower, therefore narrower, in the mid-position range of travel of each stud (see illustration on next page) to provide closer adjustment where usually the straight-ahead-driving action takes place. It also makes this close adjustment possible after normal wear occurs without causing a bind elsewhere.

Therefore, adjust through the mid-position. Do not adjust in positions off mid-position as backlash at these points is normal and not objectionable.

I. ADJUSTMENT OF BALL THRUST BEARINGS ON CAM

Adjust to a barely perceptible drag but allow the steering wheel to turn freely (with the thumb and forefinger lightly gripping the rim).

Before making this adjustment loosen the housing side cover adjusting screw (9, 10) to free the studs in the cam groove.

TO ADJUST

Unscrew the clamp screws (3) and move up the housing upper cover (4) to permit removal of shims (5). (Shims are of .002", .003" and .010" thickness.)

Clip and remove a thin shim, or more as required. Re-assemble clamp screws and tighten. Draw down tight. Test adjustment and if necessary remove or replace shims until adjustment is correct.

II. ADJUSTMENT FOR MINIMUM BACKLASH OF TAPERED STUDS IN CAM GROOVE

Adjust so that a very slight drag is felt

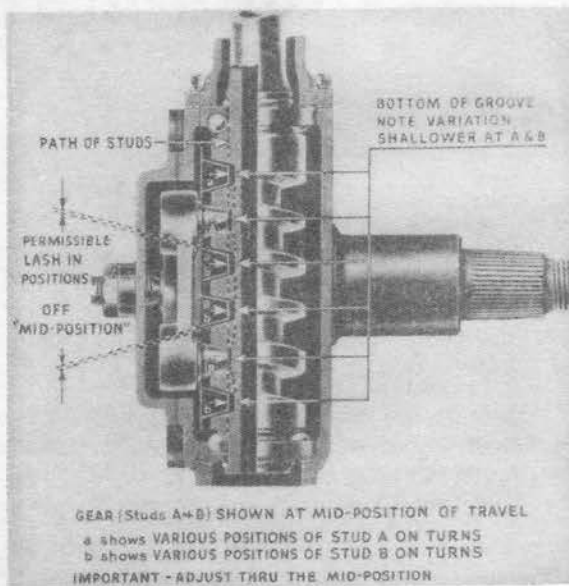
TO ADJUST

Tighten side cover adjusting screw (10) until the adjustment is correct and tighten the lock nut (9) to hold it. Then give the gear a final test.

Secure the gear at all points loosened prior to making the adjustment. Also check tightness of mounting bracket bolts and nuts, and of steering arm on lever shaft and the nut and lockwasher (7). With all supporting brackets clamped tight, turn steering wheel to see if any stiffness exists. If so, the column is probably out of alignment and needs correcting. (Refer paragraph on "Column Alignment.")

LUBRICATION

Lubricate through the pipe plug hole or fitting in the top of the housing. Fill housing slowly until lubricant begins to run out of vent hole (8) in the jacket tube. Keep housing full by adding lubricant periodically according to usage—every few thousand miles or at least every spring and fall. **Do not use ordinary grease.** Use only a recommended or approved lubricant.



GENERAL INFORMATION

COLUMN ALIGNMENT

Alignment of the column is of paramount importance. **THE STEERING GEAR MUST NOT BE SPRUNG IN ANY DIRECTION FROM ITS FREE POSITION.** To determine whether misalignment exists,

release upper column bracket and note whether the column moves to a different position, its free position. If it does, it has been out of line and should be re-clamped in proper position. When installing gear lower support bracket clamp bolts must not be pulled too tight or they will bind gear.

STEERING GEAR CONNECTION WITH FRONT WHEELS

Normally, the steering gear should be in approximately its mid-position when the front wheels are straight-ahead. To check, (the drag link must be disconnected from the steering arm) turn the steering wheel to the right as far as possible, then rotate the wheel in the opposite direction as far as possible and note the total number of turns. Turn wheel back just one-half of this total movement thus placing the gear in mid-position. Place front wheels straight ahead. The ball on the steering gear arm should now line up, or nearly so, with the ball socket on the drag link. If necessary, the steering arm can be shifted on the splines of the lever shaft to change the ball position. Shifting it one spline will shift the ball 10°. Drag link can be adjusted in length to take up minor variations.

STEERING & GEAR SHIFT CONTROL**GROUP 6****PARTS LIST**

No. Req'd.	Part Number	Description
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STEERING GEAR

1	80031	GEAR ASSEMBLY—Steering
1	62453	TUBE ASSEM.—Cam and Wheel with Bearings
1	62454	TUBE ASSEM.—Cam and Wheel
1	31247	NUT—Wheel
24	20034	BALL
2	62455	CUP—Ball
2	62456	RING—Cup Retaining
1	62450	HOUSING ASSEMBLY
1	62451	COVER ASSEMBLY—End
1	31221	BUSHING—Housing Inner
1	31222	BUSHING—Housing Outer
1	31224	SEAL—Oil Unit
1	62452	GASKET—Oil Unit Seal
1	62461	COVER ASSEMBLY—Housing Side
1	31231	SCREW—Adjusting
1	31232	NUT—Adjusting Screw Lock
1	31233	GASKET—Side Cover to Housing
4	31235	BOLT—Side Cover to Housing
4	31236	WASHER—Side Cover to Housing Copper
1	62457	COVER—Housing Upper
As Req.	63260	SHIM—Upper Cover to Housing—.002
As Req.	63261	SHIM—Upper Cover to Housing—.003
As Req.	63262	SHIM—Upper Cover to Housing—.010
4	31234	BOLT—Upper Cover to Housing
4	116120	WASHER—Upper Cover to Housing Lock
1	62458	LEVERSHAFT ASSEMBLY
1	103327	WASHER—Levershaft
1	62459	NUT—Levershaft
1	62460	ARM—Steering
1	80039	WHEEL—Steering
1	80073	RING & BUTTON ASSEMBLY—Horn
1	80074	RING—Horn
1	80075	BUTTON—Horn
1	80077	KIT—Horn Button Repair (Each Consisting Of)
1	80537	RING ASSEMBLY—Horn Button Retaining
3	80538	SCREW—Horn Button Ret. Ring Assembly
1	80539	CUP—Contact
1	80540	CUP—Spring
1	80542	SPRING—Horn Wire
1	80541	SLEEVE—Horn Wire Insulating
1	80543	WIRE ASSEMBLY—Horn
1	62463	TERMINAL—Horn Wire
1	24565	EMBLEM—Checker Horn Button
1	109354	FITTING—Housing Lubricating
1	538	PLUG—Housing Pipe (Optional)
1	80062	BRACKET—Trunion
4	118591	BOLT—Bracket to Frame Hex Hd.
4	115093	WASHER—Bracket to Frame Bolt Lock
4	114942	NUT—Bracket to Frame Bolt
1	122122	BOLT—Bracket to Steering Gear Hex Hd.
1	115093	WASHER—Bracket to Steering Gear Bolt Lock
2	118592	BOLT—Trunion Bracket Clamping
2	115093	WASHER—Trunion Bracket Clamping Bolt Lock
2	114942	NUT—Trunion Bracket Clamping Bolt
1	622890	SUPPORT—Steering Column (W S Frame)
2	215268	BOLT—Hex Hd.
2	115109	WASHER—Lock
1	80369	GROMMET—Steering Column
1	80370	CLIP—Column Support
2	116120	WASHER—Lock
2	115729	NUT—Hex Hd.

STEERING & GEAR SHIFT CONTROL**GROUP 6****PARTS LIST**

No. Req'd.	Part Number	Description
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STEERING GEAR (CONT.)

1	80624	BRACE—Steering Column Inner
1	80625	BRACE—Steering Column Outer
1	80623	SPACER—Steering Column Brace Clamp
1	124121	BOLT—Steering Column Brace Clamp Hex Hd.
1	118775	WASHER—Steering Column Brace Clamp Bolt Plain
1	115093	WASHER—Steering Column Brace Clamp Bolt Lock
1	114942	NUT—Steering Column Brace Clamp Bolt Hex
1	623090	SEAL—Steering Column Dash—(After chassis 1609)
1	80405	SEAL—Column Dash—(Before chassis 1609)
1	80406	PLATE—Column Seal Retainer Lower (Before chassis 1609)
1	80407	PLATE—Column Seal Retainer Upper (Before chassis 1609)
1	80408	RETAINER—Column Seal (Before chassis 1609)
6	132857	SCREW—Seal to Dash Round Hd. (Before chassis 1609)
6	115707	WASHER—Seal to Dash Screw Lock (Before chassis 1609)
6	116000	NUT—Seal to Dash Screw Hex (Before chassis 1609)

DRAG LINK

1	80085	LINK ASSEMBLY—Drag
1	62600	SOCKET ASSEMBLY—R. H.
1	62601	SOCKET ASSEMBLY—L. H.
2	62603	STUD—Dust Cover Socket
2	30944	NUT—Stud
2	103374	PIN—Cotter
1	62602	LINK—Drag
2	30942	CLAMP
2	30943	BOLT—Clamp Hex Hd.
2	116120	WASHER—Clamp Bolt Lock
2	115729	NUT—Clamp Bolt Hex
1	110347	FITTING—Lubricating Straight
1	191350	FITTING—Lubricating 90

GEAR SHIFT AND JACKET

1	80040	SHIFT AND JACKET ASSEMBLY—Gear
1	63900	TUBE ASSEMBLY—Jacket
1	63901	BEARING ASSEMBLY
1	80546	SPRING—Bearing
1	80547	SEAT—Bearing Spring
1	80544	CLAMP ASSEMBLY—Jacket Tube
1	63905	CLAMP
1	109855	BOLT—Clamp Hex Hd.
1	116120	WASHER—Clamp Bolt Lock
1	115729	NUT—Clamp Bolt Hex
1	63906	BRACKET—Upper
2	63907	SCREW—Bracket to Jacket
2	115109	WASHER—Bracket to Jacket Screw Lock
1	63908	SHAFT ASSEMBLY—Upper Bracket
1	63909	SPRING—Upper Bracket
1	63910	TUBE ASSEMBLY—Shifter
1	63911	SPRING—Shifter Tube
1	63912	WASHER—Shifter Tube Spring
1	80545	LEVER ASSEMBLY—Hand Shift
1	63920	LEVER AND BUMPER ASSEM.—Hand Shift
1	63913	BUMPER—Hand Lever Rubber
1	63914	BALL—Hand Lever
1	63915	SLEEVE—Hand Lever
1	80548	PIN—Hand Lever
1	80549	RING—Hand Lever Pin Retaining
1	63918	BRACKET ASSEMBLY—Lower
1	63919	BUSHING—Lower Bracket

STEERING & GEAR SHIFT CONTROL**PARTS LIST**

No. Req'd.	Part Number	Description
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GEAR SHIFT AND JACKET (CONT.)

1	109855	BOLT—Lower Bracket Clamp
1	120214	WASHER—Lower Bracket Clamp Bolt Lock
1	120368	NUT—Lower Bracket Clamp Bolt
2	63923	LEVER ASSEMBLY—Lower
2	63924	GROMMET—Lower Lever
1	63921	PIN—Shift
1	63925	SLEEVE
1	63922	WASHER—Spring
1	63926	WASHER—Felt
1	63927	CUP—Retaining
1	173102	FITTING—Lubricating
1	80658	TUBE ASSEMBLY—Gear Shift 1st. & Reverse
1	80661	TUBE ASSEMBLY—Gear Shift 2nd. and 3rd.
1	80659	TUBE ASSEMBLY—Lower Gear Shift
1	80660	TUBE ASSEMBLY—Upper Gear Shift
1	118626	NUT—Gear Shift Tube Assy.—Hex Jam
4	114784	PIN—Clevis
4	103373	PIN—Cotter