

# PROPELLER SHAFT GROUP X

## GENERAL

The Checker uses a forward and rear propeller shaft connected at the center section of the frame by a mid-ship bearing. This bearing is a prepacked sealed type, insulated in rubber.

### REMOVAL OF REAR PROPELLER SHAFT

Remove the U-bolts, nuts and lockwashers from the end yokes. Slide the sleeve yoke toward the shaft to free the bearings from their seats between the shoulders in the end yokes. Care should be taken not to drop the two bearings from the trunnion ends of the journal cross at both ends of the propeller shaft.

### REMOVAL OF FORWARD PROPELLER SHAFT

Remove bolts, nuts and lockwashers from forward propeller shaft at transmission end and U-bolts at rear propeller shaft at forward end. Remove bolts from mid-ship bearing pillow block and pull entire forward propeller shaft assembly back through center box section of frame.

### REMOVAL OF SLIP JOINT

Unscrew the dust cap from the sleeve yoke and slide the joint off from the propeller shaft. Make sure arrow marks are stamped on the shaft and sleeve yoke before removing the slip joint. If arrow marks are not readily seen, mark both members so that when reassembled they will be in exactly the same relative position, as the sleeve yoke lugs must be in the same plane as the stub ball yokes to prevent excessive vibration in operation.

### DISASSEMBLING UNIVERSAL JOINT

1. Snap Ring—Remove by pinching the ends together with a pair of pliers. If a ring does not readily snap out of the groove in the yoke, tap the end of the needle bearing lightly to relieve the pressure against the ring.
2. Needle Bearing—Remove by driving on the end of one needle bearing until the opposite needle bearing comes out. Turn the joint over and tap the exposed end of the journal cross until the opposite needle bearing is free. Use a soft round drift with flat face about 1/32" smaller in diameter than the hole in the yoke, otherwise there is danger of damaging the bearing.
3. Journal Cross—Remove by sliding it to the side of the yoke and tilting it over the top of the yoke lug.

### CLEANING AND INSPECTION

1. Clean all parts. Use a suitable cleaning fluid. Allow the parts to remain in the

cleaner for sometime to loosen up any particles of grease or foreign matter. Remove any burrs or rough spots from any machined surfaces.

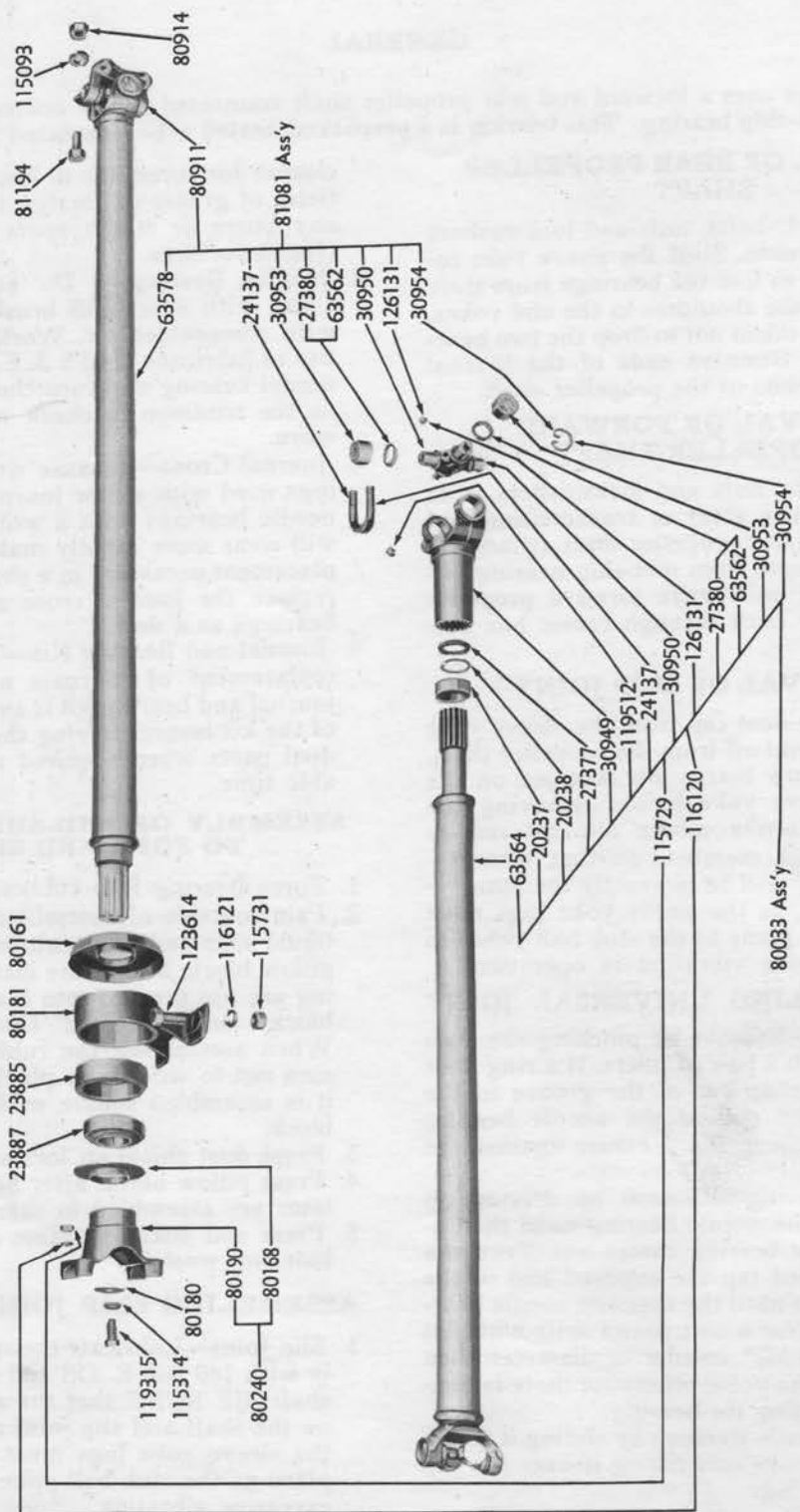
2. Needle Bearing — Do not disassemble. Clean with short stiff brush and blow out with compressed air. Work a small quantity of lubricant (140 S.A.E. Oil) in to each needle bearing and turn the needle bearing on the trunnion to check wear. Replace if worn.
3. Journal Cross—Because worn needle bearings used with a new journal cross or new needle bearings with a worn journal cross will wear more rapidly making another replacement necessary in a short time, always replace the journal cross and four needle bearings as a unit.
4. Journal and Bearing Kit—To facilitate the replacement of journals and bearings, a journal and bearing kit is available. The use of the kit insures having the correct individual parts when required and saves valuable time.

### ASSEMBLY OF MID-SHIP BEARING TO FORWARD SHAFT

1. Force bearing into rubber insulator.
2. Paint outside of assembled insulator with liquid soap and press into mid-ship bearing pillow block. Make sure insulator and bearing are not pressed into rear side of pillow block more than 7/32" from outside edge. When assembling the rubber insulator be sure not to wrinkle or pinch same and that it is assembled square with bore of pillow block.
3. Press dust shield on forward shaft.
4. Press pillow block, after bearing and insulator are assembled in same.
5. Press end yoke on spline and fasten with bolt and washers.

### ASSEMBLING SLIP JOINT ON SHAFT

1. Slip Joint—Lubricate the splines thoroughly with 140 S.A.E. Oil and assemble on the shaft. BE SURE that the arrows or marks on the shaft and slip joint are in line, since the sleeve yoke lugs must be in the same plane as the stub ball yoke lugs to prevent excessive vibration.
2. Cork Washer—Renew if necessary before assembling with the dust cap and steel washer on the sleeve yoke.



PROPELLER SHAFTS

# PROPELLER SHAFT

GROUP 10

## PARTS LIST

No. Req'd.	Part Number	Description
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### FORWARD-PROPELLER SHAFT

1	81081	SHAFT ASSEMBLY—Forward Propeller
1	63578	SHAFT SUB-ASSEMBLY—Forward Propeller
1	80911	YOKE—Companion Flange
1	*30950	JOURNAL—Joint
1	*126131	FITTING—Lubricating
4	*27380	GASKET—Journal
4	*63562	RETAINER—Journal Gasket
4	*30953	BEARING ASSEMBLY—Needle
2	*30954	RING—Bearing Snap
1	80161	SHIELD—Midship Bearing Front Dust
1	80181	BLOCK—Midship Bearing Pillow
1	23885	INSULATOR—Midship Bearing
1	23887	BEARING ASSEMBLY—Midship
2	123614	BOLT—Block to Frame Hex Hd.
2	116121	WASHER—Block to Frame Lock
2	115731	NUT—Block to Frame Hex
1	80240	YOKE ASSEMBLY—Dust Shield & End
1	80190	YOKE—End
1	80168	SHIELD—Dust
1	80180	WASHER—Forward Propeller Shaft Bolt Plain
1	115314	WASHER—Forward Propeller Shaft Bolt Lock
1	119315	BOLT—Forward Propeller Shaft
4	81194	BOLT—Propeller Shaft Flange Yoke to Companion Flange
4	63818	BOLT—Propeller Shaft Flange Yoke to Companion Flange (Used <b>ONLY</b> with Transmission Brake)
4	80914	NUT—Propeller Shaft Flange Yoke to Companion Flange Bolt
4	115093	WASHER—Propeller Shaft Flange Yoke to Companion Flange Bolt Lock

### REAR-PROPELLER SHAFT

1	80033	SHAFT ASSEMBLY—Rear Propeller
1	63564	SHAFT SUB-ASSEMBLY—Rear Propeller
1	30949	YOKE ASSEMBLY—Sleeve
1	27377	WASHER—Cork
1	20238	WASHER—Steel
1	20237	CAP—Dust
1	119512	FITTING—Lubricating
2	30950	JOURNAL—Joint
2	126131	FITTING—Lubricating
8	27380	GASKET—Journal
8	63562	RETAINER—Journal Gasket
8	30953	BEARING ASSEMBLY—Needle
4	30954	RING—Bearing Snap
4	24137	BOLT—Propeller Shaft "U"
8	116120	WASHER—Propeller Shaft "U" Bolt Lock
8	115729	NUT—Propeller Shaft "U" Bolt Hex
1	63569	KIT—Journal and Bearing

\* Parts in Kit No. 63569